A

# DISCOURSE

Upon the NATURE and CAUSE of

# Sudden DEATHS;

And the Reaſon why ſuch Numbers of People died ſuddenly in the Years 1730 and 1731; with the moſt proper Indications both to diſcover the Danger, and prevent the fatal Stroke from taking Effect.

To which is added,

A DISSERTATION upon Bleeding in a Fit of the Apoplexy; with Remarks upon the Caſe of an illuſtrious Perſon that lately dy'd abroad upon his Travels.

To which is prefix'd,

A PREFACE in Defence of the Theory of Medicine, againſt the Cavils and Exceptions of ſome late Writers: Clearly demonſtrating, that *Hippocrates*, *Galen*, and all the great Ancients grounded their practical Indications upon Principles, and a Theory.

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Eum verò, rectè curaturum, quem prima Origo Cauſæ non fefellerit. Neque verò inficiantur, Experimenta quoque eſſe neceſſaria, ſed nè ad hæc quidem Aditum fieri potuiſſe, niſi ab aliqua Ratione, contendunt. *Cel.* Lib. I. *Præfat.*

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MVSEVM
BRITAN
NICVM

THE

# PREFACE,

In Defence of the Theory of Phyſick, againſt the Cavils and Exceptions of ſome late Writers; clearly demonſtrating, that *Hippocrates*, *Galen*, and all the great Ancients, grounded their practical Indications upon Principles and a Theory.

*I AM ſenſible, how much I expoſe my ſelf to the Cenſure and Cavils of the ill-natur'd World, while I labour for the Benefit of Mankind; but as I have no other Views in publiſhing this Treatiſe, but to diſcover the Principles of Medicine, ſo far as they relate to the Nature, and*

*Cauſe, of ſudden Deaths; and the moſt proper Means to prevent the fatal Stroke: So I hope, that any little Failures or Miſtakes will be forgiven me on a Subject of ſo great Importance; and upon which the learned World hitherto has had ſo little Satisfaction.*

*BUT before I proceed, to the Treatiſe it ſelf, I muſt beſpeak the Reader's Patience a little, while I obviate a few Objections, that have been lately rais'd, by ſome Gentlemen of the Faculty, againſt the Uſe of Theories in Phyſick; as if they were inconſiſtent with the Sentiments of the Ancients; when its evident, even to a Demonſtration, that there is ſcarce an eminent Writer through all Antiquity, but what, ſtrenuouſly, inſiſted upon the Neceſſity of Principles, and a juſt Theory to ground his practical Indications upon.*

*I am extremely ſurpris'd, when I ſeriouſly reflect on the little Progreſs of this noble Science, through that vaſt Flux of Ages, from the divine* Hippocrates, *down to the preſent Times; but if we ſearch into the Grounds of theſe Impediments, I am afraid, we ſhall be oblig'd to charge them, in a great Meaſure, to our too zealouſly attaching the Authority of the Ancients, and receiving their Dictates as the ſtanding Laws of the Profeſſion.*

*THE much Reading of other Men's Works, often tinges our Brains with their Errors, and makes us never a Whit the Wiſer*

*or*

*or more Knowing. What, in them, was Wiſdom and Science, is, in us, only Opinion and Bigotry, if we too zealouſly eſpouſe their Notions, and do not, as they did, employ our own Reaſon in the Knowledge of thoſe Things, that ſo much endear'd them to Mankind; that Poſterity would ſooner queſtion their own Senſes, than diſpute a Maxim of* Ariſtotle, *tho' never ſo contrary to Reaſon and Experience.*

*THE true End of all Principles in Phyſick, is not only to aſſiſt our Enquiries in making a Diſcovery of the Cauſes, and Effects or Symptoms of Diſeaſes, but to direct us in the Application of ſuitable Remedies, in order to obtain a ſucceſsful Cure: And when they have this deſirable End, they certainly deſerve our regard, and are highly worthy of our Attention and Conſideration.*

*A Phyſician, therefore, that is reſolved to ſteer his Courſe agreeable to the genuine Laws of Nature, will make it his firſt and principal Care to diſcover the Conſtitution and Temperature of the Patient, the Cauſes of Diſeaſes, and their Effects or Symptoms, with their Events. Theſe are the Particulars, he ought carefully to ſtudy, if ever he expects to ſucceed in the Cure of Diſeaſes, or make any conſiderable Advances in the Practice of the Profeſſion.*

*IT is the Character, therefore, of a conſummate Phyſician, not only to be able to judge*

*well of the impending Symptoms, and, from thence, predict the Event of the Diſeaſe; but he ought alſo perfectly to underſtand the Meaſures moſt proper to be taken, under the preſent Circumſtances of the Patient; and to foretell with the greateſt Exactneſs, what Effects, that is, what Alterations and Changes they will produce upon the Conſtitution of the Body.*

*OF the two former Particulars,* Hippocrates *undoubtedly was the moſt judicious Maſter of all Antiquity: He, not only, by his indefatigable Labour, underſtood the Symptoms of Diſeaſes perfectly well, and was able to foretell their Events, with very great Certainty; but he was alſo greatly knowing in the Secrets of the Weather, and the Variation of the Seaſons; and, from the different Diſpoſitions of the Air, and Aſpects of the Heavens, was able to prognoſticate the certain Times, when any Diſeaſe would be Epidemical.*

*HOW well, therefore, may we apply to this illuſtrious Perſon, as a Phyſician, the Compliment that* Thucidides, *the* Greek *Hiſtorian, gives to* Themiſtocles *as a General.* "De Inſtantibus veriſſimè judicabat, & de "Futuris callidiſſimè conjiciebat:" *that is, he had a conſummate Judgment of the preſent Circumſtances of the Diſeaſe, and foretold with the greateſt Exactneſs, what would be the Fate of the Patient.*

*BUT*

*BUT tho' the Ancients were admirably expert, in both the Diagnoſtick and Prognoſtick Branches of Medicine, which is the Reaſon, why their Labours have been ſo much in Requeſt, thro' all Ages, yet, with regard to the Cauſes and Cures of Diſeaſes, which are the moſt valuable Parts of Medicine, they were certainly very defective; which was owing to their Want of true Principles, and a juſt Theory to go upon: And this Want, as I take it, was the ſole Reaſon, why they were ſo baffled in the Cure of nervoſe Diſeaſes; and obliged often to have recourſe to Amulets, Characters, and Sigils, after thoſe Diſeaſes, had eluded the Force of the beſt Remedies, they could marſhal againſt them.*

*THERE are ſome late Writers, that have attempted to introduce the obſervational Method, as the only ſure Means to improve Phyſick, and qualify a Phyſician for Practice. One of theſe, in particular, who pretends to have ſtudied* Hippocrates *more, if you will take his own Word for it, than any Man in* England, *or perhaps in* Europe, *endeavours to ground his Obſervations upon the Plan of* Hippocrates's *Books* de Morbis vulg. *but unhappily for him, he appears evidently to miſtake the very Deſign of thoſe Writings, he attempts to copy after.*

*I never, for my own Part, read a valuable Author, but I labour, as much as poſſible, to dive into the Spirit and Nature of his*

*his Meaning, and the Reaſon and Deſign of his Writings; and I cannot, but, with a great deal of real Concern, obſerve, that there is ſcarce one of* Hippocrates's *Commentators, that have rightly underſtood him. They have often fallen upon the Works of this great Man, with a ſufficient Fund of Learning, but with little Judgment, or Solidity of Thought: And hence they have, many Times, taken that for the Senſe of* Hippocrates, *that I dare boldly aver, never once enter'd his Thoughts: This will more evidently appear, by conſidering his Deſign in Writing the firſt and third Books of his Epidemicks, which are, by all, acknowledg'd to be genuine.*

*NOW it clearly appears, that the avowed Deſign of thoſe Writings were only two.*

Firſt, *From particularly deſcribing the Qualities of the Air, and Variety of Weather; and obſerving the Influence of both upon humane Bodies, he endeavours to furniſh us with Rules to judge of the Kinds of Diſeaſes, that were moſt likely to be Epidemical, at certain Seaſons.*

Secondly, *He attempts, from a Detail of the Symptoms, in particular Caſes, during the Courſe of the Illneſs, to give us Inſtructions, that may enable us to prognoſticate the Events of Diſeaſes; and, for this Reaſon, he is very minute in giving an exact Relation of every particular Circumſtance*

*and*

*and Change, that happen'd to the Patient, each Day of the Diſeaſe.*

*OF theſe Particulars,* Hippocrates *made great Account; and by obſerving their Effects, and the Conſequences that followed, he arriv'd at a very great Certainty, not only in prognoſticating the Events of Diſeaſes, but in foretelling what Diſeaſes would be Epidemical at certain Seaſons.*

*NOW how egregiouſly miſtaken muſt theſe Gentlemen be, that attempt to diſcover the Cauſes and Cures of Diſeaſes from theſe Obſervations; when it's evident, the Deſign of the Author was level'd at quite another Purpoſe, and intended only to apprize us of the Symptoms, and enable us to make a ſure Prognoſis of the Events of Diſeaſes, as appears from this Detail of theſe Writings!*

*BUT, that* Hippocrates *grounded his practical Indications, upon an Hypotheſis or Theory, may certainly be collected from other Parts of his Works; for in his Books* de * Morbis, *and that* de †Affectionibus *he adviſes,* " That none preſume to enter upon the Pro- " vince of curing Diſeaſes, that have not " firſt well conſider'd their Cauſes, *that is, the Principles from whence they derive their Origin. And a little after, he expreſly tells us* ‖, " That all Diſeaſes, that proceed " from Principles within the Body, owe " their Origin to either Bile or Phlegm": *He purſues the Argument, upon the ſame*

* Lib. I. de Morbis. † Lib. de Affectionibus. ‖ Ibid.

*Prin-*

*Principles, and aſſerts**, "That Bile and "Phlegm are brought into the World "with us, are co-exiſtent with the firſt "Principles of Life, and continue ever "after, in greater or leſſer Proportions." *As theſe two Principles are in all Men living, according to the Sentiments of this great Man; ſo he ſubjoins this Inference,* "†That "when they happen to be vitious or re-"dundant, they fail not to become the "Parent of all Diſeaſes, that any way can "affect the Conſtitution of humane Bo-"dies."

*NOW, I appeal to the common Senſe of Mankind, whether this be not a Theory, or a Method of inveſtigating the Cauſes of Diſeaſes upon Principles: And his Succeſſors were ſo ſenſible of the Neceſſity of a juſt Theory; and that* Hippocrates *had pointed out the Way to one; that they expreſly grounded the Cure of Diſeaſes upon theſe Principles, and attempted to diſcover Remedies, that they judg'd moſt proper, to purge off and correct Bile and Phlegm when vitious or redundant; and theſe they dignified with the Titles of* Chologogues *and* Phlegmagogues.

*NOR, is this otherwiſe, than what all the great Ancients thought upon theſe Subjects; they made a Diſtinction between their*

*Lib. I. de Morbis. †Lib. de Affectionibus.

*Know-*

*Knowledge of Diſeaſes by Obſervation, which depends upon a careful Inſpection of all the Symptoms; and their Knowledge of them from their Cauſes, that ariſe from a rational Deduction of Principles, grounded upon Obſervation, and the evident Laws of Nature; and doubtleſs they both have their Weight, and, under right Management, are of great Conſequence in Practice. A careful Collection of the Symptoms exhibits to our View a clear Idea of the Nature of the Diſeaſe; and a faithful Collection of the Cauſes, by rational Deductions, from evident Principles, conſtitutes the Eſſence: Nor can I conceive it poſſible, that any Phyſician can ſet about the Cure of Diſeaſes, with any Proſpect of Succeſs, without a Knowledge of the Cauſes, that is, of the eſſential Properties, that conſtitute the Diſeaſe, and the Principles upon which they depend.*

*IT would little avail us, that, under convulſive or palſical Diſeaſes, the Senſations or Motions, or both of any Organ were impair'd or defective, if we had no other Knowledge of the eſſential Properties of the Diſeaſe, that is, if we were unable to diſcover, upon what Principles, in the Nerves and Muſcles, theſe Motions were diſconcerted, in order to produce theſe Defects; for it is only from a Knowledge of theſe Principles, that we can draw thoſe practical Indica-*

*tions, moſt proper to be taken, in the Cure of Diſeaſes. And it is, from a Want of this Knowledge, that* Hippocrates, *and his excellent Commentator* Galen, *ſo frequently complain of the Fallaciouſneſs of Experience, that is, an Experience not joined with a Knowledge of the Cauſes.*

*I ſhall here, for the better Information of the Reader, beg leave to ſtate the Points in Debate, between the Gentlemen that attempt to ground their practical Indications upon Principles and a Theory; and thoſe concern'd in ſupport of the obſervational Method of Practice. The Phyſicians of the former Claſs ground their Succeſs of Practice upon a perfect Knowledge of the Cauſes, which Knowledge is deriv'd from the Principles of Nature. Thoſe of the Latter upon a real Knowledge of the Symptoms and their Prognoſticks.*

*THE Practice of the former is regular, and ariſes from a rational Deduction of Principles, that diſcover to us, the Chain of Cauſes, that ſupport the Symptoms upon the Conſtitution; and betwixt which, and the Cauſes, there is a neceſſary and inſeparable Connexion; ſo that, if you remove the Cauſes, you abſolutely relieve the Symptoms, and cure the Diſeaſe.*

THE

*THE Practice of the latter depends wholly upon the Obſervation of the Symptoms, and their Events; but as there is no neceſſary Connexion, between the Principles of the Symptoms and the Principles of the Cure, for want of a proper Knowledge of the Principles of the Cauſes, ſo its impoſſible, but that a Practice, grounded upon ſuch precarious Indications, muſt be often liable to very fatal Miſtakes.*

*IT is true, according to* Celſus*, there were Empiricks of old, who contended, that the Search into Nature, and the dark and latent Cauſes of Things were needleſs; but all the great Ancients were quite of another Mind; they were fully perſuaded, that it was a neceſſary Point, and impoſſible to ſet about the Cure of Diſeaſes, with any Proſpect of Succeſs, unleſs they were well appriz'd of their Origin and Cauſe. This is the Voice of all ſound Antiquity: All the moſt judicious Writers, from theſe Times down to our own, have fallen into the ſame Sentiments; the ſame Way of Thinking, and unanimouſly purſu'd the ſame Deſign.*

*THE Misfortune of all was, that very few of their Succeſſors, had either the Ge-*

* Præf. Corn. Celſi. p. 7.

*nius, Spirit, or Capacity of theſe illuſtrious Maſters. Moſt of 'em aver'd, that all the Treaſures of Wiſdom, ſo far as related to the Knowledge of Phyſick, and the Cure of Diſeaſes, were only diſcoverable in theſe Fountains of Antiquity, that is, in the Works of* Hippocrates *and* Galen.

*THESE Books were not only religiouſly ſtudied, but they accounted it an inexpiable Crime, for any Man to dare to deviate from their Sentiments; ſo that, in all their Controverſies, the ultimate Appeal was always to the Authority of the one or other of theſe great Men.*

*ACCORDINGLY, for ſeveral Ages, they did little more, than copy and tranſcribe, from the Writings of thoſe illuſtrious Originals; and he was judg'd the beſt Author, who was able to give the fineſt Turn to the Manner and Stile of his Writings: Nor was there any Occaſion for new Matter, ſo the Compoſition was Elegant, and the Stile claſſical. And this, as I take it, was the great Reaſon, why ſo little was done, in Phyſick, before the Beginning of the laſt Century; when Men began to fling off the Shackles of Antiquity, to ſearch into the Nature of Diſeaſes, and deduce from Principles a juſt Theory, that lets us into the moſt*

*moſt ſecret and abſtruſe Cauſes of their Exiſtence.*

*IT cannot, indeed, be deny'd, but that ſome of our Modern Phyſicians have undertaken to write of Diſeaſes, tho' it evidently appears, from their Writings, that they are incapable of diſtinguiſhing betwixt the Cauſes and Effects, or the Cauſes and Symptoms of Diſeaſes: And this is the Reaſon, why a learned, Modern Author, is ſo egregiouſly miſtaken, as to ſubſtitute Heat and Cold as Cauſes, when the meaneſt Smatterer in Philoſophy could have inform'd him, that they are only Qualities of Bodies, or Effects of Cauſes; and conſequently alterable according as the Conſtitution of the Solids and Fluids are elevated or depreſs'd, in their Motions, above or beneath the Balance of Nature; that is, the Qualities of Heat and Cold, follow the Courſe of the Solids and Fluids, and are inſeparably connected with their Motions, according as they are higher or lower, ſwifter or ſlower, than is conſiſtent with the natural Standard of Health.*

*HOWEVER, even this Gentleman himſelf, to do him juſtice, is ſo candid, as to acknowledge, that there is a manifeſt Difference betwixt foretelling the Changes and Events of Diſeaſes, and being able to effectuate a ſucceſsful Cure, or, as he more elegantly*

*gantly expreſſes it,* " In being able to reſ-
" cue the Patient from the very Jaws of
" Death".

*IN this particular, he is certainly in the right; for the former depends upon a careful Inſpection of all the Symptoms, as they ſucceſſively affect the Conſtitution, during the Courſe of the Diſeaſe: The latter is owing to a Diſcovery of thoſe Principles that conſtitute the Cauſes: For the Principles of Practice neceſſarily reſult from the Principles of the Cauſes, and are a neceſſary Conſequence of a rational and juſt Theory, grounded upon the evident Laws of Nature.*

*I have, indeed, been the more prolix upon this Subject, and more warmly eſpous'd the Principles of Medicine, becauſe the Profeſſors of Phyſick are not intitul'd to Succeſs any farther, than as they are appriz'd of the Knowledge of the Cauſes. This was the Reaſon, why I ſometime ago publiſh'd my* New Theory of Phyſick and Diſeaſes, *grounded upon the Principles of the* Newtonian *Philoſophy, in which I have endeavoured to account for all the various Alterations and Changes, that happen in humane Bodies, whether under a State of Health or Diſeaſes, from the mechanical Affections of Matter and Motion: But as that Book is now en-*

*entirely out of Print, and extremely ſcarce to be met with; ſo, if my Avocations will give me Leiſure, I intend to make ſuch Additions, in the next Impreſſion, as ſhall render it a compleat Model of Phyſick, anſwering to all the Intentions of Cure, even in the moſt perplexing Maladies.*

*THE ſureſt Mark of a true Theory is, that it does not only hit two or three Particulars, but anſwers all the Difficulties it is apply'd to, and is adequate to the Nature of the Subject, in its whole Extent, and through all its ſeveral Branches; and when the ſeveral Parts are clearly diſcover'd, well digeſted, and conducted upon the Principles of right Reaſon, there appears, methinks, more of true Beauty, Harmony, and ſolid good Senſe, at the Bottom of ſuch a Theory, than can poſſibly ariſe from any imaginary Hypotheſis, how artfully ſoever contriv'd.*

*TO conclude; though the Ancients were very Defective in their Theories of Medicine, yet it muſt be confeſs'd, they did great Things for the Times and Ages in which they liv'd; and it can be imputed to nothing but the moſt ſtupid Ignorance, if aſſiſted with the late Improvements in natural Philoſophy, the modern Diſcoveries of Anatomy, and the Advances made in other*

*other Parts of natural Knowledge, we do not excel them in all the Branches of the Arts and Sciences; and arrive at greater Perfection in our Practice, than could poſſibly be expected from them, under that Cloud of Darkneſs, in which they were involv'd.*

College of Phyſicians,

In *Warwick-Lane*,

*Jan.* 12, 1732.

IN-

# INTRODUCTION.

IN treating of thoſe Affections that ſtrike the vital Organs with a univerſal, ſudden Stop, that is, that infer an abſolute Palſie or Convulſion in the Motion of the Heart, *Cerebellum*, and of the *Medulla Oblongata*, in the higheſt Senſe of the Words; whereby the Patient is affected with ſudden Death, or a total Ceſſation of Motion in all the animal, vital, and natural Organs, I ſhall firſt conſider the Symptoms that precede this ſurprizing, ſudden Change. Secondly, I ſhall endeavour to account for the ſeveral Cauſes, that introduce ſuch a fatal Scene of Things: And laſtly, cloſe all, by conſidering the moſt proper Means to ſtave off the preceding Symptoms, and prevent the fatal Cauſes from taking Effect.

SUDDEN Deaths were ſo generally epidemical in the Years 1730, and 1731, that whoever reviſes the Yearly Bills for theſe two Years; and compares them with the yearly Bills for twenty Years backward, will perceive, that there is no Seaſon, tho' ever ſo ſickly, in which, the Article of ſudden Deaths and Apoplexies was near ſo numerous, as during that Period of Time.

THE Quickſilver in the Gage of the Barometer, during the Courſe of the Year 1730, generally ſtood at 28 $\frac{1}{2}$ to $\frac{7}{8}$, ſeldom did it ariſe to 29, but very rarely to 29 $\frac{1}{2}$; and this was occaſion'd from the moiſt Vapours and dampy Rains that affected both the Spring, Summer, and Autumnal Seaſon of that Year; whereupon the Spring of the Air was extremely relax'd, and conſequently fitteſt to produce Palſies, Apoplexies, and ſudden Deaths, from a Depreſſion of the vital Organs beneath the Standard of Nature.

BUT, in the Year 1731, rarely did it fall beneath 29 $\frac{1}{2}$, and was often buoy'd up to 29, $\frac{1}{8}$, and ſometimes to 30, and 30 $\frac{1}{2}$; and this was occaſion'd from the extreme Dryneſs of the Seaſon; a Drought ſo univerſal as ſcarce to be parallel'd in the Memory of Man, and which, in the Na-

Nature of Things, muſt produce very fatal Effects in the Motions of humane Bodies, where the vital Organs were languid and unable to ſupport the Shocks of theſe two oppoſite Extremes.

By all this it appears, that the Air was Epidemical in the Year 1730, and 1731: and that theſe ſudden fatal Effects did ariſe from either the Extremes of its ſudden Rarefaction or Condenſation; which occaſioned, in the Nerves of the vital Organs, either an abſolute Convulſion, or an abſolute Palſy, and conſequently a ſudden Death.

There is, in the ſpace of theſe two Years, an Advance upon the Article of ſudden Deaths, above what they were in any two Years preceding, ſufficient to intitle them of an epidemical Nature, eſpecially if we conſider the abſolute Number of Deaths in the Accounts of theſe laſt two Years; for in the Year 1729, there died in all 29722; whereof died of Apoplexies and ſudden Deaths only 182; but altho' there died only 26761, in the ſucceeding Year 1730, which is very near 3000 fewer, yet, in the Article of Apoplexies and ſudden Deaths, there was a conſiderable Advance, for it ſwell'd to 238, which is a very large Increaſe if we com-

pare the Diſproportion between the abſolute Numbers of Deaths, in this and the preceding Year. And if we deſcend to Particulars, and conſider it in a more contracted ſpace of Time, we ſhall find, that it anſwers equally as ſtrong or rather more ſtrongly in ſome Seaſons than others; for it is remarkable, that in the Weekly-Bill for *Novemb.* 24, 1730, Twelve Perſons were reported to have been ſtruck with the Apoplexy, or ſudden Death, tho' the whole Amount of Burials that Week was only 435: But in that memorable Weekly-Bill of Tueſday *November* 11, 1729, although there died in all 993, yet of Apoplexies and ſudden Deaths, only ſeven; ſo that all Things duly conſider'd, it appears, in the cleareſt Light, manifeſt, that the Cauſes of ſudden Deaths and Apoplexies were Epidemical in the Year 1730; and greatly more rife, conſidering the ſmall Number of People, that dy'd of all Diſeaſes, in compariſon of what expir'd the Year before. And of the Year 1730, that they were much more general in the Autumn and later, than in the Spring and Summer Seaſon of the ſame Year.

In the Year 1731 there died of ſudden Deaths and the Apoplexy 237, although the whole Number of Deaths and Burials for that Year, amounted only to 25262,

25262, which is 1499 fewer than dy'd the Year before: And of this Year 1731 it appears, that a Diſtinction is to be made, in relation to the Number of ſudden Deaths, between the Spring and latter Seaſon, and more eſpecially between the latter Seaſon, and the latter Part of the latter Seaſon; for about the 24th of *December* 1731, it ſuddenly ſet into an extremely hard Froſt, and ſo continu'd till Wedneſday the 29th, and then as ſuddenly broke into an extremely warm Thaw, which produc'd ſuch an abundance of moiſt Damps, and Vapours, that a great many People declar'd they never obſerv'd the like before; theſe ſudden Changes had very fatal Effects upon Perſons whoſe vital Organs were weakly diſpos'd; for the following Weekly Bill gave us an Account of 10 that dy'd ſuddenly and of the Apoplexy, which is a vaſt Number, conſidering, that the whole Account of Deaths this Week was only 452.

NOTHING, therefore, but the dire Calamity, that often attends ſudden Deaths, eſpecially, when the Principal of a Family is ſuddenly ſnatch'd from the Embraces of a loving Wife, and tender Children, could have prevailed upon me to attempt a Diſcourſe upon this Subject. To be alive and dead, almoſt in the ſame Inſtant of Time,

Time, is a Scene extremely ſhocking to humane Nature. To ſee a Man in a tolerable good State of Health, to perceive him able to enjoy the Converſation of his Friends and Acquaintance; to eat, to drink, and be merry: And all on a ſudden to behold the ſame Perſon diveſted of Life and Motion; and, at once, ſtruck off from the Liſt of the Living, is a Change very extraordinary; and which muſt affect the ſtouteſt Heart with Terror and Surprize.

Now to be able to diſcover the Cauſes of theſe ſudden, fatal Changes; to trace out the preceding Symptoms, that give Warning of their Coming, and the ſecret Springs by which the Cauſes act, will be a Means of preventing theſe Cauſes from taking Effect, and conſequently of ſecuring the Life of the Patient, under the greateſt impending Danger; for it will be too late to implore the Aſſiſtance of Phyſical Adminiſtrations, when the Mine is ſprung, and the Blow given, that is, when the fatal Stroke has put an entire ſtop to the vital Motions of the animal Machine.

## CHAP. I.

### *Of the Principles of Vitality in a humane Body; and of the Conſent, Agreement, and Harmony that evidently appear in the Mechaniſm of the principal, vital Organs.*

BUT, before I proceed to treat of the Nature and Cauſe of ſudden Deaths, it will be highly neceſſary, in the firſt Place, that I attempt to diſcover the Principles of Vitality in Animals, or thoſe Powers in the Body, by which Animals are ſaid to live, and upon whoſe Obſtruction and Interception, the Animal immediately expires.

I have not Time here, nor will the Compaſs I have allotted my ſelf in this Treatiſe permit me, to trace Life, and the Principles of Vitality to their Fountain Head; or ſet down the Experiments neceſſary to convince the Reader, of the Grounds of Life, from Obſervation and Fact; but I ſhall here, for his better Information, lay down a Propoſition founded on the Experiments, I have made, both upon Rep-

tiles

tiles, and the Animals of a more perfect Kind; and which I hope will be a Means of clearing thoſe Points from all Difficulties.

*Prop.* THAT all Animals, the ſlower their internal Motions, that is, their Circulation, the leſs Quantity of real Blood they contain. The leſs Quantity of Blood they contain, the ſlower their progreſſive Motions: And this appears to be the State of Creatures through all their different Claſſes from the meaneſt Reptile to the moſt perfect organiz'd Animal.

AND if we proceed, to conſider this Propoſition, in Relation to particular Kinds of Animals, we ſhall perceive that the very Reptiles have ſo much Blood near the Central Point of their Bodies, where their Motions are the moſt active, as to excite an oſcillatory Motion in the Veſſels of their extreme Parts. This ſeems to be the State and Condition of Snails, that are the ſloweſt in their progreſſive Motion, contain the leaſt Quantity of Blood; and of Conſequence have the leaſt internal Motion; which leſſens, as it approaches nearer to, or recedes farther off from the Center of the Body, which is the Heart.

WHERE-

WHEREFORE, as the Blood of theſe Reptiles is driven from the Heart, and comes nearer the Surface of the Body, it changes, from the Slowneſs of its Motion, into an aſh-colour'd ſlimy, viſcid, Humour, which conſtitutes far the greater Quantity of their natural Juices. But this Juice as it advances nearer the Action of the vital Principle, again changes its viſcid Conſiſtence into a Quality more ſanguineous, which, as ſoon as it has paſs'd the Action and Force of the vital Organ, it again loo[illegible] and by Degrees becomes paler.

BUT here a Queſtion very properly ariſes, and that is, whether the Blood is the Cauſe of Life, and the Activity of theſe Motions, according to Dr. *Woodward*'s Sentiments; or theſe Motions are the Cauſe of the Blood, that is the Cauſe of any Fluids exiſting in the Appearance of Blood: And of this we are certain, that in perfect and well-conſtituted Animals, the Blood is greatly changed in all Caſes where the Motions of the Solids either increaſe or leſſen; and if the Organs have this Power to change and alter the Texture of the Blood, they muſt have the ſame Power to generate it; not that I would have, what I either have ſaid, or ſhall ſay, upon this Subject, to derogate

from that ſacred Maxim, *that the Life is in the Blood*; for the Life is aſſuredly ſo far in the Blood, that without this Fluid, Life cannot exiſt, even in the moſt imperfect Animals.

THAT Motion is a Property inſeparably annex'd to Life, is certain; but that the Idea of Life is ſo wholly involv'd in the Property of Motion, as not to contain other Properties ſuperior to it in Nature, is a Propoſition, that could never have been believ'd, had not ſome Smatterers in Philoſophy zealouſly maintain'd it.

THOSE Experiments that are brought by * Dr. *Woodward* to prove, that the Life of the Animal is in the Blood, prove no more, but, that the Fibres of the Organs are capable of being put in Motion, by the Application of proper Objects, a long Time after their natural Motions are extinct; and which, if they prove any Thing, would prove, that a Piece of Cat-Gut has Life, becauſe, if it is cut in Pieces, and theſe Pieces ſtrew'd upon any warm Body, they will ſhrink up their Fibres, and turn and rowl like ſo many Maggots.

THERE is, therefore, ſomething, more neceſſary to Life, beſides the Motion of the

* Vid. Nat. Hiſt. of the Earth, Illuſt. p. 72, 73, &c.

the Parts, though taken in the moſt abſolute Senſe of the Words; for Life, eſpecially Animal Life, implies an Exiſtence of Motion, together with an Exiſtence of Senſation; or at leaſt a Capacity of Senſe agreeable to ſuch a State of Being, as the Animal is capable of. And as there are different Claſſes of Animals, ſo, theſe different Claſſes, are as much diſtinguiſh'd from their different Degrees of Senſation, as the different Motions of their Organs.

MOTION, and a Capacity of Senſation therefore, are the Powers, that conſtitute the Principles of Vitality in animal Bodies; and the Inſtruments ordain'd by Nature, for the Exerciſe of theſe Principles, are the Organs of the Heart, of the Brain, and of the Medulla Oblongata: The latter aſſiſts the Senſation, the former the Motions, that are neceſſary to ſupport the Life of the Animal.

INDEED it is difficult to diſcover the vital Union of ſome Animals, or wherein their Principle of Vitality conſiſts; as for Example! What Organ is it, that ſupports the vital Union of a Snake or Adder? for if you divide the Head from the Body, that Diviſion will not immediately put an End to the Life of theſe Animals. Divide the Body into divers Pieces, and

it will ſtill give Tokens of Motion, of Senſation, and conſequently of Life. Open the Breaſt and take out the Heart and Lungs, and notwithſtanding this Exſection the carnous Fibres will give evident Tokens of their Vitality. Theſe Experiments, I have, more than once made, in the Diſſection of Vipers, that would, eight and forty Hours after both the Lungs, Heart, and Head were taken away, ſhew evident Marks of Life.

But though it be difficult to diſcover the Organs of Vitality in Reptiles, and other Creatures of ſlow Motion; yet in Animals, where the Motions are quicker and more active, this Diſcovery becomes eaſier; for, in all perfect Animals, if you cut out the Heart and reſpiratory Organs, the Animal immediately ceaſes to breathe, to move, and conſequently to live. The ſame happens if you ſtrike a ſharp Inſtrument into the Cerebellum, or Medula Oblongata; for in this Caſe the Animal immediately falls down diveſted of all animal, vital, and natural Motion; from whence I infer, that, in order, to preſerve the Principles of Vitality, abſolutely free, in a humane Body, it is neceſſary to preſerve the principal, vital, Organs clear of Obſtructions.

Now

Now there is ſuch a Harmony, Conſent, and Agreement between the principal, vital Organs, that is, between the Organs of the Heart and of the Cerebellum, which are Vital, in the higheſt Senſe of the Words; that if an Obſtruction or Oppreſſion, at any Time, happens, from any Cauſe, to the one, the other is always affected with the Change, and exerts a Force and Motion ſuperior to what is Natural, in order to remove the Impediment, reſolve the Obſtruction, and give a freedom to the oppreſs'd Organ.

In all Caſes, therefore, where the Heart lowers its Motions, and the Blood is driven into the Lungs and Aorta, with a leſſer Impulſe, that is, in a Fit of Fainting or a Syncope, if the Brain and Cerebellum, at ſuch Times, did not exert an extraordinary Motion of Syſtole and Diaſtole, and immediately detach a conſiderable Quantity of animal Fluids to the Heart's Aſſiſtance; the Patient would aſſuredly ſuffer a ſudden, fatal Stroke, under every fainting Fit. But a new Supply of animal Fluids in that very Inſtant, coming to its Aſſiſtance, reſtores the contractile Powers of the Heart, invigorates its Motions, and conſequently obliges this important Organ to redouble its Beating,

Beating, whereupon the Patient revives from the Oppreſſion.

THIS peculiar Harmony, Conſent, and Agreement between the Motions of the Cerebellum and of the Heart, ariſe from a neceſſary Mechaniſm in their Nerves and Fibres, ſo exquiſitely adapted, by the Benevolence of Nature, as to anſwer each others Neceſſities, in all Caſes, and at all Times, where either is oppreſs'd, ſo that the Oppreſſion be not above the Bearance of Nature: Nor is this Conſent only carried on between the Organs of the Brain, of the Cerebellum, and of the Heart; but the Stomach alſo ſeems evidently to partake of the Mechaniſm, that neceſſarily exiſts between theſe important Organs; becauſe in all great Concuſſions of the Brain, the Stomach gives aſſured Marks of its Affection, by its frequent Heavings and Vomitings: Nay, all the inferior Organs conſpire to ſupport this Agreement, by raiſing or falling of their Motions, according as the Action of thoſe principal, vital, Organs is intended or remitted.

NOW this ſurprizing Piece of Mechaniſm, is more immediately ſupported from ſeveral Slips and Branches of the 6th and 8th Pairs of Nerves, that are diſpos'd of from

from the Brain to the Heart, and from the Brain and Heart to the Stomach; whereby each particular Organ is oblig'd, by a mechanical Neceſſity, upon the Failure of Motion in any one, to redouble its Vigour and Action, not only for the Benefit of the oppreſs'd Organ, but for the Support of the whole Fabrick, and all its ſeveral Parts.

To conclude; the more active the internal Motions are, in any Claſs of Animals, the more briſk are their Senſations, and conſequently the more vigorous their Organs of Life: And it is evident that, thoſe Animals, that have the greateſt Quantity of Blood, generally have their Organs of Life in the greateſt Perfection; and which ſooneſt expire, under any imminent Stroke or Preſſure, that may, immediately, intercept the Commerce between the principal, vital Organs, that is between the Brain and Heart.

CHAP.

## CHAP. II.

### *Of ſudden Death conſider'd in it ſelf, and as it is diſtinguiſh'd from all other Diſeaſes, in which People are ſaid to die ſuddenly; and of the Parts principally affected in Caſe of ſudden Death.*

THUS far of the Principles of Vitality, and the Harmony, Conſent, and Agreement eſtabliſhed between the Actions of the principal, vital Organs: I ſhall now proceed to ſtate the true Notion of Death, when it is ſudden, and conſider the Import of the Words ſudden Death, as they are contradiſtinguiſh'd from an Apoplexy, and all other Diſeaſes in which People are ſaid to die ſuddenly; for if an acute Apoplexy ſeize the Brain, and the Patient quits the Stage of Life in twenty four Hours: In this Caſe, the Patient cannot ſo properly be ſaid, to be ſtruck with ſudden Death, as to die of an Apoplexy; for if the vital Organs, that is, the Inſtruments that ſerve Reſpiration, and the Motion of the Pulſe, give the leaſt Token of Motion, it's a certain Indication, that the Heart moves, that Life exiſts,

exiſts, and conſequently that the Death is not ſudden.

INDEED, it muſt be confeſs'd, that, in a general Senſe of the Words, all Deaths, that follow upon the moſt chronick Diſeaſes, may be ſaid to be ſudden, becauſe there is only one Point of Time, in which the Motions and Senſations of the animal, and vital Organs are ſuddenly Extinct, that is, in Conſumptions, Dropſies, and all other Diſeaſes, that terminate in Death; there is but one Point of Time neceſſary to make the Change, from the abſolute Exiſtence of Life, to the abſolute Exiſtence of Death.

BUT, what I would be ſuppos'd to mean, in this Place, by ſudden Deaths, is, an immediate, ſudden Ceſſation of Motion in all the animal, vital, and natural Organs, that is, an immediate ſudden Extinction of Life, in a Perſon, under a tolerable ſtate of Health, in the ſhorteſt Period of Time; and, that is, to expreſs my ſelf in Terms as little ambiguous as poſſible, when the Patient is well, and expires in the Compaſs of a few Minutes: And this Change we call ſudden Death, in the higheſt Senſe of the Words; though an extremely acute Apoplexy, or violent Syncope, in which the

Patient ſuddenly expires, or ſurvives the fatal Stroke, not above five or ſix Hours, may, with ſome Limitation, be call'd a ſudden Death.

THE Parts principally and more immediately affected, in order to infer the fatal Stroke, are the Organs of the Heart, of the Cerebellum, and of the Medulla Oblongata, together with their Action: Theſe are all the Organs that, in the animal Conſtitution, infer an immediate Vitality; and upon the Rupture, Diſciſſion, or abſolute Obſtruction of whoſe Fibres, there naturally enſues an Extinction of Vitality, that is, an abſolute, immediate, Extinction of Life; and that is an abſolute, immediate, Ceſſation of Motion, in all the animal, vital, and natural Organs, which, in a more appropriate Senſe of the Words, we call ſudden Death.

THESE are the three chief Springs, upon whoſe Freedom Life is ſafe. The Lungs I do not look upon to be vital in the higheſt Senſe of the Words, I only eſteem of them as the Conveyers of a vital Influential Fluid or Air; whereby the ſeveral vital Organs of the animal Machine are kept a going, and conſequently Life continued to the ſeveral Parts: and, indeed, it is difficult to conceive how Life can be

ſafe, or how the animal or vital Organs can maintain their Motions without the vital Effects of this enlivening Fluid the Air, convey'd by the Lungs.

HOWEVER, the Heart, undoubtedly, is the firſt and principal Spring of all Motion, whether vital or animal; and deals out the Crimſon Stream, that goes to the Head, where, having ſupply'd the Brain, Cerebellum, and Medulla Oblongata, with a fine animal Fluid, fitting to nouriſh their Fibres, it is again, by the Veins re-convey'd to the Heart. And this is the noble Courſe, that Nature makes in animal Bodies, whoſe Periods ſometimes exceed an hundred Years without the leaſt Stop or Lett: And whoſe ſurprizing Effects infinitely diſcover the Wiſdom and Contrivance of the divine Architect, that of ſuch periſhable Materials, could build up a Machine, that would endure for ever, were but the external Elements exactly ſuited to the Motions, Temper, and Diſpoſition of its Organs.

## CHAP. III.

*Of ſudden Deaths, with all their Symptoms, Cauſes, and Concomitants, that ariſe, in the Conſtitution of animal Bodies, from the principal, vital Organs elevated, in their Motions, above the Balance of Nature; that is, from an abſolute Convulſion affecting the Motion of the Heart, of the Cerebellum, and of the Medulla Oblongata, with a fatal Obſtruction in the leaſt Moment of Time.*

FEW Deaths are ſo ſudden, but that ſome Forebodings give Warning of their Coming; nor is it poſſible, that the Cauſes can approach ſo near to the Cittadel of Life, that is, the Heart, but that they muſt raiſe ſome Marks, Characters, and Tokens, that if carefully attended to, will diſcover the Appearance of the Enemy.

HOWEVER,

HOWEVER, I muſt confeſs, that it requires a very nice and critical Judgment to determine the Symptoms, that abſolutely preſage ſudden Death, from either an over-elevated, or depreſſed State of the vital Organs. It will, I think, be a ſufficient Indication, if the Characters forebode abſolute Danger; and Perſons have been known to die ſuddenly, that were ſubject to ſuch Symptoms ſometime before the fatal Stroke.

THOSE Perſons, above all others, are in danger of ſudden Deaths, that are of an unwieldy, corpulent Body; that have ſhort Necks, ſtrait Cheſts, and are ſubject to hitch in their Breathing; great, large Heads, with a very ſanguine or pale Countenance, if they indulge in a luxurious Manner of Living, ſeldom eſcape a ſudden, fatal Stroke.

I obſerv'd, in my Treatiſe of Conſumptions, that there was a certain Quantity of Motion impreſs'd, by Nature, upon the Solids and Fluids of a humane Body, abſolutely neceſſary to preſerve us in Health; that is to keep the Conſtitution perfectly clear of all Obſtructions. That whenever theſe Motions ſwerve from the Standard of Nature, and are either higher

or

or lower, ſwifter or ſlower, than their natural State requires they ſhould be, there will neceſſarily be a Diſeaſe; that this Diſeaſe, under theſe Deviations, will be different in Proportion to the Greatneſs of the Elevation or Depreſſion of the Solids and Fluids: That there are certain Extremes, under both States, that Nature cannot bear; and whenever the Motions of the Solids and Fluids touch upon either of theſe Extremes, they break the vital Chords, and conſequently occaſion a ſudden Death.

It neceſſarily follows, therefore, that whenever this extreme Elevation or Depreſſion happens on a ſudden, without ſwiftly running through the ſeveral Stages neceſſary to conſtitute an acute Diſeaſe; or without ſlowly paſſing through the ſeveral Degrees, neceſſary to conſtitute that of a chronick Nature, there will, according to the Reaſon of Things, enſue a ſudden Death, in which Caſe the Elevation or Depreſſion puts a Period to the vital Union, in the ſmalleſt Compaſs of Time.

I will venture, therefore, to lay it down, as a general Principle, that the immediate Cauſe of all ſudden Deaths, muſt ariſe from the principal vital Organs, ſuddenly

ly elevated or depreſs'd in their Motions, above or beneath the Balance of Nature, that is, from an abſolute Convulſion or Palſy affecting the Motion of the Heart, of the Cerebellum, and of the Medulla Oblongata with a fatal Obſtruction, in the leaſt Moment of Time.

And I look upon it, to be abſolutely impoſſible, in the Nature of Things, that the fatal Stroke of Death can ſeize the Conſtitution upon a ſudden; but that it muſt ariſe from the vital Solids being affected with one or other of the foregoing Extremes; and thoſe Extremes being diametrically oppoſite, muſt produce Effects equally contrary; that is, the Symptoms and Phenomena preceding the fatal Stroke, muſt be directly different under an over-contracted or convuls'd State of the vital Organs, from what they are, in Caſe the ſame Inſtruments are over-relax'd, or under a palſical Indiſpoſition: But as I deſign in this Chapter only to treat of ſudden Deaths, that ariſe from an abſolute Convulſion of the vital Organs; ſo I ſhall go on to trace out the Symptoms and Phenomena, that precede the ſudden, fatal Blow, under this elevated State of the vital Motions.

THESE ſudden Deaths, from this elevated State of the vital Organs, are moſt liable to attack Infants, Children, and People advancing to Age; rarely or never, do they affect old People, from the Imperfection of their Motions to bring on ſuch ſudden, fatal Cauſes.

THE Marks, Characters, and Tokens, that conſtitute the preceding Symptoms, and give warning of the Approach of this fatal Enemy, are a Lividneſs in the Countenance, an extreme ſhortneſs of Breathing, great Inflammations of the Eyes, intenſe Heats, and Fluſhings of the Face; a great Heat, Weight, and Senſe of Fulneſs in the Brain. A Dizzineſs, Vertigoe, and Scotomia. A beating, throbbing Pain in the upper Part of the Head, great, acute, and extremely ſenſible. The Pulſe is hard, full, and ſometimes intermittent; the Urine of a yellow, bright, and flameous Colour, which ariſes from the Quantity of Salts extracted from the Blood, under this elevated State of the Heart and Arteries: And although theſe Characters do not always produce ſudden Deaths, but are known to attend other Diſeaſes, yet they always portend Danger, and, therefore, are carefully to be guarded againſt.

How-

HOWEVER, theſe Symptoms are more or leſs intenſe in Proportion to the Quantity of Blood, flung up into the Brain and Organs of the Senſes: And, then, as ſoon as the fatal Cauſes act, that is, as ſoon as the Blood Veſſels of the Brain burſt, or preſs upon the Cerebellum or, Medulla Oblongata, down falls the Patient depriv'd of all ſenſible Perception; upon which the animal, vital, and natural Motions are extinct in the leaſt Moment of Time; and this we call ſudden Death, from the Motions of the vital Organs, elevated above the Balance of Nature.

INDEED, ſometimes, People have not the leaſt Foreſight or Warning of the Blow, but, negotiating in their Buſineſs, or private Concerns of Life, are ſuddenly ſurprized with the fatal Stroke, and fall down dead without the leaſt Struggle. This aſſuredly happens from a ſudden Jerk of the vital Solids, or from a ſudden Breaking of an Impoſthume in the Organ of the Heart, of the Brain, or of the Medulla Oblongata; and the ſudden fatal Stroke, happening from theſe Cauſes, we call ſudden Death, in the higheſt Senſe of the Words.

In Relation to the immediate Cauſes of ſudden Deaths, acting in the leaſt Moment of Time, we are to conſider, that there is always a greater Quantity of Blood, a greater Secretion of animal Fluids, and conſequently a greater Preſſure upon both the animal and vital Organs, than is conſiſtent with the Balance of Nature, or that Equilibrium of the Solids and Fluids neceſſary to conſtitute a ſound State of Health. That this Preſſure occaſions, the Organs of the Heart, of the Cerebellum, and, of the Medulla Oblongata, together with their Arteries, to act with a more forcible Impulſe, in every Syſtole and Diaſtole; that is, the Machinulæ of their Fibres act upon each other with very great Violence, in every Contraction or Diſtraction they ſuffer, for maintaining the Motion of the animal and vital Fluids, which occaſion the Convulſion; and if any of theſe extremely fine Chords, or Veſſels of the Brain, or Cerebellum, happen to ſtart or break under ſuch great Emotions, which they are apt to do from the exquiſite Fineneſs of their Make and Texture, then the Brain is immediately overflowed or delug'd with Blood; upon which the vital Motions are extinct in the leaſt Moment of Time.

THE ſame violent Cauſes acting, in the ſame violent Manner, may occaſion a Rupture either in the Veſſels of the Heart it ſelf, or of thoſe leading thereto; in which Caſe the Motion of this important Organ is ſuddenly ſuffocated, and Death brought on in the leaſt Inſtant of Time. Or if any of the inner Coats of the larger Veins or Arteries happen to burſt or form a Varix, or Aneuriſm; the Event of theſe Effects ſeldom fails, at one Time or other, to be ſuddenly fatal; and theſe, I think, are generally the immediate Cauſes of ſudden Deaths, when they ariſe from this elevated State of the vital Organs.

THE Matter, that lays the foregoing Preſſure of a greater Quantity of Blood upon the principal, vital Organs, and acts as the proximate Cauſe, in diſpoſing them to this ſudden, fatal Cataſtrophe, is a gluttonous Charge of thoſe Meats and Drinks, we take for the Support of Life. A Diet continu'd upon high-ſeaſon'd Meats, poignant Sauces, and Plenty of rich Wines, in Time, heighten the Contractions of the vital Organs, inflame the Blood, fire the Paſſions, and render the Nerves extremely elaſtick: And when the Nerves of the vital Organs are wound up to the higheſt Stretch, they can bear;

then the leaſt higher Impulſe, from either a ſudden Change of the Air, or ſetting in to a thorough Debauch, may crack thoſe noble Springs of Life, extremely diſconcert their Action, and put an everlaſting Stop to all their Motions.

THE Matter, that acts as the remote Cauſe, in putting the foregoing proximate and immediate Cauſes in Motion, and in enabling them to produce ſuch immediate, fatal Effects, is the Air. Of this Element I ſhall ſay little more, but, that whatſoever makes a ſudden Change in the Motions of the principal, vital Organs, muſt neceſſarily effect a ſudden Alteration in the Action of the vital Faculties; and as the Atmoſphere ſuddenly changing from an extremely cold, to an extremely hot, or from an extremely dry, to an extremely moiſt Intemperature, muſt produce a ſudden Alteration in the Motions of the Solids and Fluids: So theſe ſudden Alterations, thus ſuddenly coming on, muſt neceſſarily effect a ſudden Proſtration of the Strength, a ſudden Ceſſation of the animal Faculties, a ſudden Extinction of the vital Principle, and conſequently a ſudden Death *.

* Vid. Introduction.

THE Paſſion, moſt incident, to endanger ſudden Deaths, from this elevated State of the vital Solids, is exceſſive Joy. In this Caſe, where the fine Filaments of the Brain are wound up into an exceeding great Springyneſs or Elaſticity, from the Appearance of ſome immediate Good, preſently to be enjoy'd, the Heart beats with a greater Impulſe, the Blood boils, and the Spirits rarifie ſometimes to ſuch an extraordinary, immenſe Degree, that the tender Veſſels of the Brain ſtart; upon which the Sinuſes are delug'd, the Cerebellum compreſs'd, and an univerſal Stop put to all the vital Springs of Nature.

OF the Force of this Paſſion, in producing ſudden Deaths, *Riverius* relates a very remarkable Story. It is of the unfortunate Fate of a fine, young Lady in *France*, who, being contracted to a young Gentleman of very promiſing Parts, and, on the Day of Marriage, receiving the Pen from the Notary, to ſubſcribe her Part of the Marriage Contract; before ſhe had finiſh'd half her Name, fell down depriv'd of all animal, vital, and natural Motion; and expir'd without the leaſt Struggle: And this ſurprizing ſudden Change, happen'd in the midſt of her Friends

Friends and Relations, who were aſſembled to ſee the Solemnity of the Marriage, and partake of an Entertainment provided on that Occaſion.

It is very remarkable, that this young Lady was very ſubject to frequent Syncopes; and would ſwoon away upon the ſlighteſt Commotion, or any ſudden Surprize, that rais'd or depreſs'd her Paſſions: And it is reaſonable to ſuppoſe, that this immediate, and ſudden Extinction of Life, aroſe from the Vehemency of her Paſſion of Joy, for the happy Change ſhe was about to make, which drove the Blood and animal Fluids like a Torrent upon both the Heart and Cerebellum, in the ſame Inſtant of Time; whereby the vital, as well as the animal Powers were extinct, as ſoon as the fatal Cauſes began to act, that is, as ſoon as the Fibres of the Heart and Cerebellum were obſtructed in their Motion; which was, as ſoon as the Paſſion did extraordinarily exert it ſelf upon the Solids and Fluids of the foregoing Organs.

But this, I muſt obſerve, that before there can be ſuch an extraordinary, ſudden Commotion in the Blood and animal Juices, from either the Air, our Diet,

or

or the Paſſions; it is neceſſary that the Action of moſt of the principal Springs, that hold us in Life, be greatly weakened and impaired; upon which the leaſt higher Impulſe, breaks the tender Filaments of the Brain, compreſſes the Cerebellum and Medulla Oblongata, whereupon the Nerves, going to the Heart, are totally obſtructed; and thus is a fatal Stop put to the Motions of all the vital Organs, in all Caſes, where the vital, nervoſe Solids are, extremely, elevated or contracted above their natural Standard.

CHAP.

## CHAP. IV.

*Of ſudden Deaths, with all their Symptoms, Cauſes, and Phenomena, that ariſe, in the Conſtitution of animal Bodies, from the principal, vital Organs depreſs'd, in their Motions, beneath the Balance of Nature; that is, from an abſolute Palſy affecting the Organs of the Heart, of the Cerebellum, and of the Medulla Oblongata, with a fatal Obſtruction, in the leaſt Moment of Time.*

IT is impoſſible, in the Nature of Things, that a ſudden Death can affect the Conſtitution of animal Bodies, but, that it mnſt ariſe from either an abſolute Convulſion, or an abſolute Palſy; and, as in the former Chapter, I treated of ſudden Deaths, with all their Concomitants, that ariſe from an abſolute Convulſion affecting the Organs of Life; ſo, in this, I ſhall proceed upon the ſame Principles to diſcover the Cauſes, that may affect the foregoing Inſtruments with an

an abſolute Palſy, that is, that ſtrike the ſeveral Motions of the animal OEconomy, with a univerſal, ſudden, Stop in the leaſt Moment of Time.

The firſt Symptoms, that preſage ſudden Death about to happen, from this depreſs'd State of the vital Solids, are a univerſal Plethora or Fulneſs of the Habit join'd with Phlegm: In this Caſe the Countenance appears pale, ghaſtly, and the Conſtitution bloated. To theſe Symptoms ſucceed great and ſudden Pains of the Head; a Noiſe or unuſual Sound in the Ears. Sleeps longer and deeper than uſual. A ſudden inſtantaneous Loſs of Memory, of Speech, and of the Faculty of Hearing. A frequent Vertigoe ſometimes is the only Symptom that gives Warning of the Coming on of the fatal Stroke.

If the foregoing Symptoms happen to be ſucceeded with ſhort Breathings, frequent Syncopes, and Fits of Fainting, then it is well, if the Patient eſcape with the Stroke of a Lethargy, or ſlight Fit of an Apoplexy: But if, under theſe Circumſtances, he is negligent of his Condition, and ſuffers the Cauſes to gain Ground upon his Conſtitution, then, towards the

Spring, or Fall; or any conſiderable Changes of the Weather, eſpecially thoſe repleat with Moiſture, the Cauſes act with greater Vigour, or a ſtronger Impulſe, the Veſſels of the Brain ſtart or burſt; upon which the Blood immediately preſſes into the Sinuſes of the Brain, compreſſes the Cerebellum and Medulla Oblongata, obſtructs the Motion of the Nerves going to the Heart, and Organs ſerving Reſpiration; and at once intercepts, as well the vital, as the Motion of the animal, Organs; whereupon the Patient, immediately, falls down diveſted of all Life, and the Operation of all the noble Faculties.

THUS far of the preceding Symptoms, that uſher in ſudden Death, under this depreſs'd State of the vital Organs; I ſhall now go on to explain the Cauſes, as well immediate, as thoſe more remote, that may occaſion ſudden Death, in the higheſt Senſe of the Words, that is, that may put a Stop to the vital Motions, in the leaſt Moment of Time. In this Proceeding, I ſhall firſt conſider the Cauſes, that act upon the Organs of the Senſes, in order to produce the preceding Symptoms, and thoſe that give Warning of the Approach of the fatal Stroke; after that, I ſhall enlarge upon the Cauſes

ſes, that immediately act upon the Organs of the Heart, of the Cerebellum, and of the Medula Oblongata, in order to put an immediate Stop to the Motions of the vital Solids.

The Cauſes of the Symptoms, that precede ſudden Death, and give Warning of the fatal Stroke, ariſe from the ſame Cauſes, that infer ſudden Death, acting with a lower Degree of Impulſe; for in this Caſe the Arterial, Venal, and Nervoſe Solids relax; but not ſo much as to be immediately, preternaturally, fatal; for their Relaxation does not, immediately, penetrate the Cerebellum, or diſſolve the Vinculum or Medium between Life and Death; that is, the Chords of the principal, vital Organs, that hold us in Life, are not ſo immediately broken, but, that, they have Time to excite thoſe Symptoms, that give Warning of the Approach of this fatal Change.

Now, if it ſo happen, that the Motions of the Veins, Nerves, and Arteries, are, from any Cauſes depreſs'd, it neceſſarily follows, that the Juices will acquire a greater Viſcidity or Thickneſs, whereby they will be incapable of paſſing, or ſecreting through the fine Veſſels of the Brain. This Viſcidity of the Blood

obſtructing in the Brain, and preſſing upon the ſenſible Organs, generally introduces thoſe firſt Symptoms, that pave the Way to this fatal Stroke; for the Brain being oppreſs'd with Phlegm, ſeparated from this viſcid State of the Blood, under this depreſs'd State of the vital Solids, is the Cauſe why the Organs of the Senſes, are affected, whereby a Change is introduc'd in the Action of Senſation; and hence ariſe that Stammering or Faultering of the Speech, that ſudden Failure of Seeing, and thoſe tingling Sounds in the Ears, with a Paleneſs, or Wanneſs of the Complexion.

To this depreſs'd State of the Solids and Fluids, we may alſo reduce thoſe polipoſe Concretions, ſo often found in the Brain, in the Lungs, but eſpecially in the Heart and great Veſſels leading thereto: And when the Cauſes are thus laid in Train, the leaſt Changes, in the Air, or our Diet, may effect a Rupture in the Veſſels of the Brain; upon which there follows an immediate Ceſſation of Motion, in all the animal, vital and natural Organs, and conſequently an abſolute, ſudden Stop in the Action of all the animal, vital, and natural Faculties, which, in an appropriated Senſe of the Words, we call ſudden Death.

I SHALL, therefore, venture to lay it down as a Propoſition, moſt certainly true, that, in order to extinguiſh Life, it is neceſſary to extinguiſh the Motions, in the Fibres of both the Heart, of the Cerebellum, and of the Medulla Oblongata, that is their Capacity to move; for if a Capacity of Motion continues, then, upon the Obſtruction of either the Heart or Cerebellum, the Fibres of the unobſtructed Organ will neceſſarily exert its mechanical Powers, and oblige the obſtructed Organ into Motion again; upon which the Patient will revive from the Fit of a Syncope or Apoplexy, as either the Organs of the Heart or of the Brain were the Parts principally affected, in producing the Stroke.

AND this is the Reaſon, why, in divers Caſes, we often perceive the Brain like an Oven with Heat, while all the extreme Parts that depend upon the Heart's Motion are ready to freeze with Cold. This aſſuredly ariſes from an exceſſive Motion in the Fibres of the Brain, in order to diſengage the Obſtructions of the Heart, and the Veſſels that miniſter to the exterior Organs: But whenever any Cauſes act on the Body ſo, that

that the Fibres of the Cerebellum, and the Fibres of the Heart diſcontinue their Motions in the ſame Inſtant of Time, and are incapable of lending their Aſſiſtance to each other, in this Caſe, their Motions are extinct in a Moment of Time, and Life ceaſes in a few Minutes.

It is obſervable that, few die ſuddenly under this depreſs'd State of the vital Solids, but what are above Fifty, and, who during their younger Years of Life, were exceſſively indulging in their Diet and Manner of Living: And I look upon it as impoſſible to affect the Body with ſudden Death, unleſs the Organs of the Heart and Arteries impair in their Motions, whereupon this viſcid State of the Blood is accumulated upon the Habit: And from this Origin ariſe thoſe polipoſe Concretions generated in the largeſt Veins and Arteries neareſt the Heart, and which ſometimes are found form'd in the Baſis of this important Organ, and which block up the Paſſages leading to and from the Lungs, to and from the Brain, and to and from the principal Organs of the Body. This is a conſtant Cauſe of ſudden Death, and, experimentally, found to be ſo upon divers Diſſections.

Besides, ſudden Deaths may ariſe from accidental Cauſes, as a Compreſſion of the Cerebellum, and Medulla Oblongata, but this ſeldom happens, unleſs a Stroke, Blow, or Fall, infer an Intropreſſure of the Scull, on the Back-part of the Head; for all leſſer Preſſures on the Sides, or Fore-part, may cauſe great Diſorders in the Brain, and, thereby, likely enough, excite a Delirium, Lethargy, or Palſy; but ſudden Death is not ſo eaſily effected; nor can we of our own ſelves, immediately, put a Period to this miſerable Life, as appears from the fruitleſs Attempts of thoſe, that have endeavour'd, with all their Might, to make away with themſelves.

It appears, therefore, that it is very difficult to kill a Man; or for a Man to kill himſelf on a ſudden. In poiſoning Animals with *Opium*, it is very difficult to adjuſt the Doſe: For if the Doſe be too large, the Stomach, in many Caſes, will reject it by Vomit. I try'd this Experiment three ſeveral Times unſucceſsfully upon a Dog, my ſelf, but in the fourth, by the Aſſiſtance of good Management, it did the Work, and he died greatly convuls'd: Upon diſſecting the

the Brain, we perceived, that ſeveral of the great Veſſels were broke, and the reſt greatly inflam'd, upon which the Blood overflow'd the Sinuſes of this important Organ.

IN extraordinary Concuſſions of the Brain, from a Blow, Fall, or Contuſion, unleſs you wound the Cerebellum or Medulla Oblongata, the Effects are not immediately mortal: And it is with great Difficulty you can affect the Cerebellum, or Medulla Oblongata, becauſe the Motions that come to theſe Organs, will firſt affect the more pulpoſe Parts of the Brain, which are ſofter, and more yielding to the Impreſſions of the Cauſes; and which would ſooner, according to the Nature of Things, excite an Apoplexy or ſome Cephalick Diſeaſe, than ſudden Death. But in extraordinary Motions or Rarefactions of the Blood in the Brain, from plentifully drinking of hot, fiery, ſpirituous Liquors, it often happens, that the Motions of the Cerebellum, and Medulla Oblongata, are oppreſs'd to that Degree, as to intercept the Motion of the animal Fluids from going to the Heart, whereby an entire, ſudden Stop is put to the Motions of the animal Machine.

I HAVE obſerv'd, in the Introduction, that more dy'd in the Years 30, and 31, than in the like Period any Time heretofore; and if this be a Fact publickly atteſted; then a proper Enquiry will ariſe, *viz.* To what Cauſe is it moſt likely, that ſuch a Change is owing.

THAT the Elements of our Conſtitutions are the ſame now, that they were twenty Years ago, is ſcarce to be queſtioned, nor is it poſſible that we can have made ſuch conſiderable Advances in our Luxury, as to occaſion ſuch frequent, ſudden Shocks to Nature: Our Diet doubtleſs, affords the Matter of the Obſtructions, but then the Queſtion recurs, *viz.* What puts that Matter in Motion, and enables it to act with ſuch a fatal Impulſe? and this we can aſcribe to nothing ſo properly as the Air.

WE have been told of late Years, of noxious Corpuſcles, Animalculæ, and infectious Miaſmata floating in the Air; and which are fruitful, in producing Alterations and Changes in the human Body; but I very much queſtion, whether the Air is capable of affecting the Conſtitution

ſo, as to precipitate him with a ſudden Death, but from a ſudden extraordinary Rarefaction or Condenſation of its Spring, in ſuch a Manner as to make a conſiderable, ſudden Change in the Motions of the vital Organs; and as the Air in 1730 was generally moiſt, hazy and ſubject to thick, dampy Fogs; and therefore fitteſt to produce either a fatal Apoplexy or a ſudden Death, from an abſolute Palſy ſuddenly affecting the Motions of the animal and vital Organs; ſo the Air in 1731, was extremely dry, ſultry, and conſequently its Spring gteatly elaſtick: This could not happen; but that a Principle in the Corpuſcles of the Air, muſt be introduc'd diametrically oppoſite to what it was during the Courſe of the former Seaſon: And which would neceſſarily have a great Influence over all thoſe Bodies, that were of a bilioſe Conſtitution, or whoſe Syſtem of vital Solids were already wound up to the higheſt Degree of Elaſticity they were capable of: In this Caſe the leaſt higher Impulſe would over-contract thoſe noble Springs of Life diſconcert their Faculties, and, by an abſolute ſudden, Convulſion, put a fatal Stop to all their Motions.

*HIPPO-*

* *HIPPOCRATES*, in both his Books of Epidemicks, and Aphoriſms often inculcates that a moiſt Southerly Wind, abounding with much Rain, is productive of Palſies, Apoplexies, and ſudden Deaths; but theſe Effects it could not produce unleſs there had been a Diſpoſition in the Habit favouring thoſe Affections: This Diſpoſition of the Habit is an Affection of the Brain, whereby its Glands are diſpos'd to relax and ſecrete a groſs, viſcid Phlegm, which, obſtructing, in the Fibres of the Cerebellum and Medulla Oblongata, totally diſables the animal Fluids from being convey'd to the Heart, upon which the Animal falls on a ſudden, diveſted of all animal and vital Motion.

I SHALL now conclude this Chapter of the Nature and Cauſe of ſudden Deaths, ariſing from this depreſs'd State of the vital Solids, by ſubjoining the Caſe of the Dutcheſs of *Brunſwick*, who lately died ſuddenly at *Paris* in *France*.

THIS Lady's Death moſt certainly was ſudden, in the higheſt Senſe of theſe

* Hipp. Lib. I. Sect. VII. de Morb. vul. Aphor. 13. 16, 17.

Words; for ſhe perceived her ſelf in a tolerable State of Health, the Moment before ſhe expir'd; and was well, alive and dead, in leſs than a quarter of an Hour.

UPON Diſſection, it appeared, that the Cauſe of this extraordinary and ſudden Change, was owing to an Impoſthume, that had formed it ſelf, in the Membrane of the right Ventricle of the Heart, which ſuddenly breaking, diverted the natural Courſe of the Blood, from the Pneumatic Artery, which neceſſarily occaſioned a formal Interruption of the Circulation, a ſudden Proſtration of the Strength, and conſequently a ſudden, univerſal Stop of the vital Principle: For the Impoſthume, upon breaking, form'd a very large Sinus, that penetrated into the Pericardium, into which all the Blood flow'd, that ſhould have diſcharg'd into the Pulmonic Artery; nor was it poſſible, in all appearance, to have prevented this fatal Blow, in Caſe the true Cauſe had been diſcover'd; becauſe the Rupture was inevitable, at one Time or other, if the ſame Cauſes had exiſted: All that could have been done, in this Caſe, for the Preſervation of this Lady, muſt

muſt have been by lowering the Force and Motion of the Blood, and endeavouring, by that Means, to prevent the Rupture of the Impoſthume; and the only Means that could have effected this, muſt have been a ſpare Diet, and to have kept the Paſſions calm.

CHAP.

## CHAP. V.

### *Of Relieving the preceding Symptoms, that threaten ſudden Deaths, from the Motions of the vital Organs depreſs'd beneath the Balance of Nature.*

THUS far we have examin'd into the Nature and Cauſes of ſudden Deaths; and the Reaſon why ſuch Numbers dy'd ſuddenly in the Year 1730, and 1731; we have alſo taken Notice that ſudden Deaths were moſt properly divided into two Kinds, *viz.* Thoſe that ariſe from a Depreſſion or abſolute Palſy, and thoſe that ariſe from an Elevation or abſolute Convulſion of the vital Organs. I obſerv'd alſo upon that Diviſion, that it was juſt, and agreeable to the Laws of Nature; and impoſſible to conceive any Idea of a ſudden Death; but what muſt, immediately, ariſe from either the one or other of theſe Extremes, the Achme of which affects the vital Organs with an inſtantaneous, fatal Stroke.

I SHALL now proceed upon the ſame Principles to diſcover the curative Indicati-

ons

ons moſt proper to ſtave off the preceding Symptoms, and prevent the fatal Stroke from taking Effect; for there is a neceſſary Agreement and Connexion between the Principles of the Cauſes, and the Principles of Practice. And this Connexion conſiſts in a perfect Knowledge of the Rules of Practice, drawn from the Principles of the Cauſes; for if the Laws of Practice have not a perfect Dependence upon the Principles of the Cauſes, its impoſſible the Phyſician can ever have any certain Grounds to go upon; as I have abundantly diſcover'd in the Preface to this Treatiſe, and could go on to confirm with divers Reaſonings, and Experiments; but that the Brevity, I have ſet my ſelf, will not permit me to run farther Diviſions upon this Subject.

HOWEVER, it is, doubtleſs, a very great Pleaſure for the Phyſician to reflect, that Nature is always helping on his Side, that is, the Mechaniſm of the Conſtitution is ſo exactly ſuited to the Intentions of Nature, that ſhe is always attempting to recover the ſeveral Organs from their Preſſure, by raiſing or falling their ſeveral Motions, as far as is in her Power,

Power, according as the Exigence of the Caſe requires.

And as theſe ſudden Deaths, that ariſe from a Relaxation, Obſtruction, or abſolute Palſy of the vital Organs, were generally Epidemical in the Year 1730, becauſe the Weather, during that Compaſs of Time, was extremely hazy, abounding with Moiſture, and therefore propereſt to relax the vital Solids: So I ſhall go on in the firſt Place, to lay down the curative Indications moſt proper to relieve the preceding Symptoms, that ariſe from this depreſs'd State of the vital Organs.

In the firſt Place, therefore, when Perſons of a groſs Habit, perceive a ſudden, dull and heavy Pain of the Head, a Faultering of the Speech, and a Vertigoe or Dizzineſs, attended with a great Shortneſs of Breathing, they may be aſſured that theſe Symptoms are Indications of a Load and Preſſure upon the animal or vital Organs, or perhaps both; in this Caſe, and under this depreſs'd State of the vital Organs, let Blood be but ſparingly drawn; and I ſhould judge ℥x taken from the jugular Vein ſufficient for the firſt Time.

If

If, from the Preſſure of the Symptoms, there ſeems a Neceſſity to make farther Diſcharges of this Fluid, which is diſcover'd by a Shortneſs of the Breath, then let Cupping-Glaſſes be apply'd to the Neck and Parts adjacent, with large and deep Scarifications. This ſeldom fails to enlarge the Breath, and relieve the Pains of the Head, by taking off from the Load and Fulneſs of the Veſſels.

But if the Preſſure ſtill continues, which ſeldom happens after theſe Means have been purſu'd, then let a large and ſharp ſtimulating Bliſter be apply'd to the Back-part of the Head, which aſſuredly reſtores the over lax Fibres of both the animal and vital Organs, whereby they act with greater Steadineſs, in reſolving the Phlegm and other Juices, that, generally, conſtitute the Load and Fulneſs, under this depreſs'd State of the animal and vital Motions.

Thus far having proceeded, in our topical Applications, we muſt, in the next Place, go on to conſider, what farther Means may be proper to ſecure the Conſtitution of the Patient againſt the At-

tacks of the fatal Blow; and I know nothing preferable to gentle Vomits, which are of ſingular Service, if adminiſter'd under proper Management.

THESE Remedies, do not only act as an Evacuant, but they reſtore the over-lax Machinulæ, contract the impair'd Springs of the weaken'd Fibres, and repair the Breaches made in both the animal and vital Organs.

OF Vomits, under this diſtreſs'd State of the animal and vital Organs, I ſhould prefer the Ipocacuhanna, becauſe it is the gentleſt in Operation; for, in this Caſe, great Care muſt be taken, leaſt, by a Rupture in the vital Veſſels, we do not haſten on that fatal Period, we are, by theſe Means labouring to prevent: And, therefore, if any Contra-indications ariſe, that may diſcover Vomits improper to be given, we muſt, then, attempt the Benefits of what we expected from their Operation, from the Adminiſtration of the warmer Purges.

℞ Tinct. Sacr. Elix. Salut. ā ʒiſs. Syr. de Spin. Cervin. ʒvi. Sal. Vol. Ol. Spt. Lavend. C. ā gtt. xxx. f. Hauſt. debito Tempore, Sumend. & rept 3° quoque Die.

THE

THE Debitum Tempus, or due Time of adminiſtering Remedies, in all Cephalick or Nervoſe Diſeaſes, where the Symptoms ariſe, that threaten ſudden Death, is the preſent. In theſe Caſes we muſt not wait till the Morning, if call'd in the Evening, before we adviſe to bleed or purge, becauſe that Time is the moſt ſeaſonable for the Adminiſtration of theſe Remedies; but we muſt inſiſt upon the preſent Opportunity, as the only proper Seaſon, where ſuch imminent Danger ariſes from Delay.

AFTER a ſufficient Diſcharge of the Load, that preſſes upon the animal and vital Organs, it will be highly proper to adminiſter ſuch Remedies as have a Power to facilitate the Blood's Motion, break the Coheſions of viſcid Juices, and render the Circulation open, free, and regular. Thoſe Medicines, therefore, will be moſt proper to help theſe Letts and Impediments, that have both a great Weight, and contain ſomething in their Nature of a reſtrictive Quality, that is, that both may fuſe the Blood, and ſtrengthen the Veſſels at the ſame Time; of all which, I know nothing preferable to the following.

℞ Conſerv. Anthos ℥i. Flaved. Aurant. ℥ſs. Pulv. Viperar. ʒvi. Chalyb. Simpliciter pptt. ʒii. Sal. Vol. Corn. Cervi Spec. Diamb. ſine od. ā ʒi. Syr. Carioph. q. ſ. f. Elect. de quo ſumat Quant. Nuc. Moſchat. ſingulo Mane hora 4t. Pomerid. & Hora Som. cum Cochlear. 4tr ſequent.

℞ Vin. Chalyb. Aq. Menth. ana. ℥iiii. Aq. Theriacal. ℥ii. Syr. Croc. ʒvi. f. Julap.

When the Danger is removed, which is known by the Abatement of the preceding Symptoms, then, to confirm the Patient in a ſound State of Health, it will be highly neceſſary that he lower his Diet, intend his Exerciſe, and moderate his Paſſions, which will be an effectual Means, to ſtave off the Return of thoſe Symptoms, that ſeldom appear the ſecond Time, but, that they give the Conſtitution a terrible Shock.

These Strokes, that are ſo ſuddenly fatal, as to give no Warning of their Coming, are abſolutely without Relief; but, even here, theſe might be prevented, would the Patient, but, in Time, lower his Diet, correct his Paſſions, and put

put a Curb upon his vitious Appetites; for it is ſcarce poſſible that any Perſon can die ſuddenly, that has not either a very weakly Conſtitution of the vital Organs; or is not extremely indulging in his Diet or Manner of Living, whereby the vital Springs are greatly impair'd, and ready to ſtart from the leaſt Impreſſions of the Air, our Diet, or any other of the Nonnaturals, eſpecially if a Perſon often Indulges to Exceſs, when he is pretty well advanced in Years. However our Buſineſs is to learn, from the ſad Examples of other People, to be more careful of our own Fate.

CHAP.

## CHAP. VI.

### *Of Relieving the preceding Symptoms, that threaten ſudden Death, from the Motions of the vital Organs elevated above the Balance of Nature.*

HAVING examin'd into the curative Indications moſt proper to relieve the preceding Symptoms, that threaten ſudden Deaths, from a depreſs'd State of the vital Organs; and which were generally epidemical in the Year 1730, from the moiſt, hazy Weather, that moſt commonly affected the Seaſons, during that Period of Time; I ſhall now proceed, upon the ſame Principles, to diſcover the Rules of Practice moſt proper to relieve the oppreſs'd Motions, under an elevated State of the vital Organs, that is, when they are in great Danger of ſuffering a ſudden, fatal Stroke, from an abſolute Convulſion; and under which State, it is reaſonable to believe, great Num-

Numbers expir'd, ſuddenly, in the Year 1731, from an univerſal great Drought, that affected the Air and Atmoſphere, during that Period of Time.

THOSE Affections, that ſtand in direct Oppoſition to each other, as to their Cauſes, moſt certainly require a different, if not a direct, contrary Method of Cure; and under theſe Circumſtances the propereſt Method, to prevent ſudden Deaths from taking Effect, is immediately to ſubſtract from the Cauſe that threaten Danger; and as the Cauſe that portend Danger, is generally a Plethora of Blood, exiſting in the Veſſels; ſo I hold it highly neceſſary, that ſixteen Ounces of this Fluid be immediately extracted from the Jugular Vein; and, if in the Compaſs of five Hours, the Symptoms do not abate, let Bleeding be repeated, and the ſame Quantity taken away the ſecond Time. This is the only Means neceſſary to abate the Symptoms of Fulneſs, ariſing from an Abundance of Blood, preſſing upon the Fibres of the Brain and Cerebellum; and thereby intercepting the Commerce between the Head and Heart; for this Diſcharge of Blood will be a Means to keep open the Paſs, and enable the vital Organs to carry

ry on the Commerce, which is abſolutely neceſſary to ſupport us in Life.

If, in four Hours Time after Bleeding, the Patient has not a Stool, then let the following Gliſter be injected; for ſcarce any purging Medicine will operate, under this elevated State of the Solids, till you ſouple the Inteſtines, relax their Fibres, and ſoften the Excrements by a lenitive Gliſter.

℞ Decoct. Com. P. Enemat. ℔ß. Elect. Lenitiv. ℥iß. Mel. Violar Ol. Lin. Com. ā ℥iii. Sal. Gem. ʒiii. f. Enema ſtatim Injiciendum.

The next Morning, let him take the following purging Draught.

℞ Decoct. Sen. ℥iij Syr. de Spin. Cervin. Elix. Salut. ā ℥ß. f. Hauſt. Mane ſumendus & rept. pro Re nata.

These are the moſt proper Methods to empty the Veſſels, take off from the Load and Preſſure of both the animal and vital Organs; and to facilitate the Blood's Circulation: And, if upon theſe Adminiſtra-

niſtrations, he find himſelf reviv'd, his Senſes more lively, agile, and quick, in their Operations, it is a ſure Indication, that a great Part of the Load and Preſſure is remov'd; upon which, it will be highly proper to adviſe the following, both to ſtrengthen the Brain, reſtore the Nerves, and give a freer Circulation to the Blood and animal Fluids.

℞ Conſerv. Roſar. Conſerv. Anthos an. ʒvi. Pulv. de Guttet. ʒiii. Cinnab. nativ. ʒii. Spec. Diamb. ſine. od. ʒi. cum q. ſ. Syr. Carioph. f. Elect. de quo ſumat Quant. Nuc. Moſchat. Major. ſingulo Mane Hora 4ta Pomerid. & Hora Somni, ſuperbib. ℥iiii ſequent.

℞ Sem. Peon. excort. ʒiii. Sem. 4tr. frigid. major. an. ʒii. Amigd. dulc. excort. N° xx. Contund. in Mort. marmor. ſenſim affund. Aq. Hord. ℔iſs. col. cui adde Aq. Peon. C. ℥iiii. Spir. Nitr. dulc. ʒi. Sacchar. alb. ʒiii. f. Emulſio.

Or in Caſe the Patient be of a full Habit, and greatly abounding with a ſizy Blood; then, after Bleeding, I ſhould

prefer the following Methods, and Adminiſtrations to all others.

℞ Calomel. Gr. xii. Conſerv. Roſar: q. ſ. f. Bol. ſingula Nocte, ad tres Vices, ſumendus.

℞ Fol. Senn. ℥iiiß Rhei inciſ. ℥ß Rad. Glycir. ℥i. Coq. in Aqua font. ℨvi. ad ℨiii. Col. cui adde Syrup. de Spin. Cervin. ℥vi f. Hauſtus mane ſumend. cum Regimine.

As to the Application of Bliſters, I ſhould not indeed approve of their Uſe, under this over-contracted State of the vital Solids, were it not, that they mightily aſſiſt, in reſolving all Obſtructions, whether they ariſe from an over-contracted, or an over-relax'd State of the Fibres of the Brain and Nerves; nor are they leſs ſerviceable in aſſiſting to fuſe, and thin the animal Juices, by drawing off a Quantity of the ſizy Humours.

If, with the Uſe of the foregoing Medicines, the animal and vital Faculties recover their former Vigour, I ſhould then think it highly neceſſary, in order to

to further theſe favourable Diſpoſitions, that the Patient drink the *Bath*-Waters, eſpecially if no Inflammation remains upon any of the ſuperior Organs. By ſuperior Organs, in this Place, I would be underſtood to mean the Brain, Heart, Lungs, and Stomach. And this Courſe ended, let him have a Couple of Iſſues made in his Neck, one, on each ſide the Spine. And thoſe Indications, I have here laid down, in this, and the preceding Chapters, I look upon, as the propereſt Means to ſtave off the preceding Symptoms, that threaten ſudden Deaths, or portend ſudden Danger, either from an Elevation or Depreſſion, in the Motions of the vital Organs, above or beneath the Balance of Nature.

In ſome particular Caſes, where the Shock is ſo ſudden, as not to give Time to try the Efficacy of Remedies, I ſhould immediately attempt to open the Jugular Artery, which though lodg'd very deep, yet certainly may be attempted with Succeſs, if done by a Skilful Anatomiſt. The Advantage, I would propoſe from this Operation, is, that the Revulſion will be ſo ſuddenly made,

as to prevent the fatal Stroke from taking Effect; if it does not ariſe from a Rupture of the vital Veſſels, or Veſſels conſtituting the vital Organs, in which Caſe it is always abſolutely irretrievable.

CHAP.

## CHAP. VII.

### *Of the Government of the Paſſions, in order to ſtave off the preceding Symptoms, that threaten ſudden Death, from either an Elevation or Depreſſion of the vital Motions, above or beneath the Balance of Nature.*

THERE are not any of the Paſſions or exorbitant Deſires of the Soul, that have occaſion'd more ſudden Deaths, than the Extremes of Joy and Grief. Theſe two Paſſions generally ariſe from the Effects of our Ambition, and are ſure Attendants of our Succeſſes or Diſappointments in Life. When we enterprize any bold Attempt, and ſucceed in our ambitious Views; this Succeſs moſt commonly gives us Joy in Extremes: But if our Expectations run high, and we perceive ourſelves baulk'd in the Purſuit, then the Diſappointment affects the Vigour of the Mind, and fills our Thoughts with ſad, and melancholy Reflections.

IT is the Duty, therefore, of a brave Man, that would purſue ſolid Happineſs, and avoid the Evils and Miſeries of Life, in the firſt Place, to get acquainted with the Knowledge of himſelf, and the Make of his Conſtitution; and be able to balance the Mind, and keep the Paſſions ſteady, as well in the moſt trying Circumſtances of Life, as when his Affairs run in a more proſperous Channel.

A GREAT, a generous, and a gallant Man, bears up in the World like a Ship in the Sea well ballaſted, that will ride out the moſt violent Storms of Wind or Weather: So let the Billows rage, the Sea roar, and the Madneſs of the People combine againſt him, yet he will ſtand his Ground in ſpite of Fortune, and bear up his Virtue, in Oppoſition to the moſt ſhocking Ills of Life.

I HAVE often made it a Queſtion with my ſelf, which was the moſt eligible State of Life, and how might a Man enjoy the greateſt Happineſs, that his Nature is capable of, and reap the bleſſed Fruits of all his Labour. To this or the like Queſtions it might be

be anſwer'd in the General; that to be perfectly content, is the moſt ſupreme State of Happineſs, and the *Ne plus ultra* of all our Felicity. But then this Queſtion recurs, *viz.* What are the moſt rational Enjoyments that conſtitute this perfect State of Tranquility, or as perfect a State, as is conſiſtent with our imperfect Natures, and the frail Tempers of our Minds: And this I take to conſiſt in a Steadineſs of Soul, ſupported with a right Judgment and Underſtanding of Things. Theſe Principles conſtitute true Wiſdom; and true Wiſdom inſtructs us how to govern the Paſſions; and bids us reflect on the Bleſſings we enjoy, without too anxiouſly purſuing thoſe out of our Reach.

THERE is no being content without this Reflection. When a Man is poſſeſs'd with Food and Raiment, eats well and drinks well; and enjoys a perfect good State of Health; he has all the Reaſon in the World to think himſelf happy; and if, under theſe Circumſtances, he wants Happineſs, that Want moſt certainly ariſes from the Indulgence of ſome criminal Paſſion, which he ought to do all in his Power to reſtrain. What I mean here by Food and Raiment, and

a perfect good State of Health, is the Enjoyment of all the good Things of this Life, in ſuch a Meaſure, as is ſuitable to the Figure he ought to make in the World, let his State or Quality be what it will: But the Misfortune of all is, that, moſt of us run counter to the Principle and Practice of this moſt excellent Virtue, Contentment; and could we look into the whole Round of Nature, and take a View of the ſeveral Claſſes of Mortals, from the higheſt to the loweſt, from the richeſt to the pooreſt; and from the Prince to the Beggar, we ſhould ſcarce find a Peaſant, but he would be a Squire; nor a Squire, but he would be a Knight; nor a Knight, but he would be a Lord; nor a Lord, but he would be a Duke; nor a Duke, but he would be a King; nor a King, but he would be a God.

And this Deſire of Fame, or of being greater than what we are, is a Principle ſo univerſally diffus'd through all the Sons of *Adam*, that, I believe, it would be difficult to diſcover any one Individual, that is not tinctur'd with ſome Marks of it.

And I am confident, that would moſt of us ſearch into the Heart, and take a View

View of our inward Thoughts, we ſhould there perceive, that let us have made never ſo conſiderable Advances in Life, from our original Littleneſs, yet we ſtill perceive an Eagerneſs in the Paſſions, to preſs forwards; and this Eagerneſs of the Paſſions to purſue a Remove above what we are, ariſes from our Want of Contentment in our preſent Circumſtances; tho' perhaps theſe Circumſtances, but a few Years ago, were a State to which our then preſent Meanneſs could ſcarce have aſpir'd.

If we enquire into the Grounds of this Paſſion or Deſire, of arriving at the Summit of Perfection, we ſhall perceive it to ariſe from an Expectation of ſome higher Enjoyments, in every Remove, we make in Life, above what we are yet poſſeſs'd of; or elſe whence this Inſtinct of ſtretching our Thought above all that is Mortal for our Bliſs and Happineſs; as is the Caſe of thoſe, that, from the ſmalleſt Beginnings, come to be poſſeſs'd of all the earthly Grandeur, this ſublunary World can ſhower down upon them.

An Example of this Unſteadineſs of humane Nature we have in the Perſon of *Alexander the Great*, who, from the Poſ-

ſeſſion of one ſmall Province, aroſe to be Lord of all the known World. He certainly was a Man of ſingular Endowments, had a vaſt Compaſs of Knowledge, and perfectly well underſtood the ſecret Springs upon which humane Nature is conducted: Nor was it poſſible, but, that a Man, of his Spirit, Genius, and finiſh'd Parts, bred up under ſuch an accompliſh'd Maſter as *Ariſtotle*, would enquire into the Nature of Things, and the Reality of their Exiſtence, and not ſuffer his Underſtanding to be dazzled with Appearances only.

When this mighty Hero had once form'd in his Mind, that vaſt Deſign of conquering the *Perſian* Empire; it cannot be doubted, but that he reflected upon the Greatneſs of the Enterpize, and the Numerouſneſs of the Armies he was to encounter: Nor had he any other Means to balance theſe Difficulties with, but the Hopes of Conqueſt, the Courage of his own Heart, and the Order, Diſcipline, and Bravery of thoſe Troops, he was to lead againſt ſuch effeminate Numbers, as compos'd *Darius*'s Army.

The Generality of the World, who only view the Surface of Things, look'd upon the firſt Setting out of this young Hero,

Hero, as the Enterprize of either a Fool or a Mad-man: But how was the general Opinion alter'd, in Relation to his Conduct and Underſtanding, when he return'd victorious, and fraught with the Spoils of the *Perſian* Empire! Short therefore is the Tranſition from a Mad-man to a Hero, and the only Medium is Succeſs; which had the Victor fail'd of, its highly probable all his Heroiſm would have dwindl'd into a Phrenſy; and, inſtead of a Triumph, muſt have ſubmitted, to have been dragg'd at the Wheels of the Victor's Chariot.

But after he had, by his Conduct, Valour, and ſurprizing Succeſs, advanc'd himſelf to be Maſter of the *Perſian* Empire, did this content his great, ambitious Spirit? Not in the leaſt, for then he enlarg'd his Views; and the Number of his Conqueſts only whetted his Mind, and prov'd a new Spur to greater Enterprizes; he, at length, caſt in his Mind the Conqueſt of the World, or at leaſt of all thoſe Kingdoms, that would not pay a willing Homage to his uſurp'd Power. And when he had maſter'd the Bulk of Mankind, enſlav'd the moſt renown'd Empires, Kingdoms, and Provinces to his Luſt, and could conquer no longer; did this high, exalted Station of Life afford

him the Bleſſings of a contented Mind? far from it; for then he ſigh'd and griev'd, his Slaughters were at an End, and that there were no more Worlds within the Sphere of his Power to conquer; which plainly proves that his Deſires of Dominion, enlarg'd with his Acquiſitions; and that his Thirſt for Empire, like that of a Dropſy, was inſatiable.

To conclude, That Man can only be ſaid to be great and brave, that can conquer the unruly Paſſions of the Soul, and ſubject all their Sallies to the Command of Reaſon; for in this Victory is ſum'd up all the Happineſs of Life. Nor is Ambition properly a Paſſion, but a Monſter of the Soul, that extends its Views in Proportion, as it foſter'd in the Heart, till at length the whole World contains too little Space to bound the Compaſs of its Views; for the more we get, the more we want, and conſequently the more we crave; for of our Wants, and of our Cravings, there is no End, if once we cheriſh, in the Soul, a Spirit of Ambition.

*ALEXANDER*, after he had conquer'd the World, wanted to be a God, and the ſame Spirit of Ambition we may obſerve, in ſome Degree, diffus'd through us all:

all: We all want to be Eſquires, Knights, Lords, Dukes, and Princes, that is a Remove above what we are, and were we once advanc'd to theſe Dignities, we ſhould want to be above them; that is, we ſhould find in our ſelves the Spirit of *Alexander*.

I WAS oblig'd to take Notice of the Paſſions in this Light, becauſe I have obſerv'd, that more ſudden Deaths have ariſen from Diſappointments, and theſe Diſappointments grounded upon ambitious Views, than all the other Paſſions put together.

CHAP.

## CHAP. VIII.

### *A Diſcourſe upon the Effects of Bleeding in Lethargick and Apoplectick Caſes, with ſome Remarks upon the Caſe of an illuſtrious Perſonage, that lately died abroad on his Travels.*

THE Phyſician, that reſolves to make the Good of Mankind his chief and principal Care, and is not led by any mean Views, or narrow ſelfiſh Ends, is a real Bleſſing to the Place where he lives. And as he is commiſſion'd to be the Guardian of Life, and the Reſtorer of Health, in all Caſes where the Conſtitution is impair'd, or its Fences broken down, through the Violence of a Diſeaſe; ſo has he every Reaſon that can oblige a worthy Mind to be juſt to his Character, and the Dignity and Honour of his Profeſſion.

NOR can Heaven and Earth afford ſtronger Motives for Diligence, for Vertue, and the other Endowments of a generous Mind, than, in making him the

the Inſtrument of ſo much good, in relieving the Infirmities and Miſeries of human Nature.

* All the great Ancients, that were remarkable for their Wiſdom, and Knowledge, look'd upon the Profeſſion of Phyſick, when ſupported upon honourable or philoſophick Principles, as a Science that enobles the Soul with high and lofty Sentiments, and by giving him a Superiority of Knowledge †, lifts him up to an Equality with the Gods.

Nothing, but the Welfare of Mankind, in General, and the Frequency of Apoplexies of late Years, could have prevail'd with me to engage upon the Diſcuſſion of this Point, *viz.* Whether Bleeding is the firſt, proper, and moſt general Remedy, that ought indiſcriminately to be adminiſter'd in the Fit of an Apoplexy, that is, whether it be a Remedy ſo abſolutely neceſſary, as not to admit of Exceptions under ſome particular Circumſtances; and what thoſe Exceptions and Circumſtances are, in which if

* By the great Ancients here, I would be ſuppoſed to mean the *Principes Artis Medicinæ*, or thoſe that were at the Head of the Profeſſion, in the ſeveral Ages of Antiquity.

† Medicus enim Philoſophus Deo æqualis habetur *Lib. de decenti Habitu.*

ad-

adminiſter'd, it may prove of dangerous Conſequence.

THE Apoplexy on all Hands is acknowledg'd a great, ſudden, and dangerous Diſeaſe, and, therefore, demands the ſpeedy Aſſiſtance of a Remedy, great, ſudden, and powerful in its Operation, that may immediately diſcuſs the Cauſes, ſolve the Fit, and reſtore the ſeveral affected Organs to their former Health and Vigour again: And as the Cauſe of the Fit, moſt generally ariſes from either a Redundancy of Blood or Phlegm obſtructing in the Fibres of the Brain, and thereby intercepting the Action of the animal Faculties; ſo I am ſenſible that the Remedy firſt in View is to draw Blood; which is look'd upon as the moſt ſovereign Remedy in all Caſes of Apoplexies; and which has receiv'd ſuch a Sanction from the Authority of *Hippocrates*, *Galen*, and *Celſus*, that it may ſeem too daring an Enterprize in me, to depart from the Sentiments of ſuch great Authors.

AS this Point of Bleeding therefore, is of the greateſt Conſequence in Practice, as it is acknowled by * one of the

* *Cel.* Lib. 3. Chap. 27. de Reſolutione Nerv.

moſt

moſt emminent of the Ancients, either to kill or cure, when adminiſter'd in the Fit of an Apoplexy; ſo it demands our deepeſt Conſideration, to diſcover in what Caſes it may be adminiſter'd with Safety; and when, if advis'd, it may turn to the greateſt Detriment of the Patient.

FOR my own Part, though I reverence Authority, as much as any Perſon whatever, when founded upon Reaſon, and the Nature of Things, yet I abhor that ſlaviſh Authority, that would ſubject the Reaſon of Man to mere Aſſertions, without the leaſt Shadow of Proof; and am perſuaded I ſhall be able to make it appear to the Satisfaction of the Reader, that Bleeding will as certainly kill, if adminiſter'd, under ſome Circumſtances of an Apoplexy, as it will ſave, if advis'd in others.

AUTHORITY, I muſt confeſs, is a ſtrong Motive to incline the Will of thoſe that are reſolv'd to go and think with the Herd of Mankind; yet it is the weakeſt Argument in the World to convince the Underſtanding, where it hath no evident Grounds to ſupport it; for Authors, however venerable for their Learning

and great Characters, we ſhould never look upon as infalible Guides; but as Men form'd of the ſame Materials, led and miſled by the ſame Paſſions, and of Conſequence ſubject to the ſame Prepoſeſſions and Failures with our ſelves.

I GRANT, indeed, that there are no univerſal and infallible Rules to determine this Point by, but what ariſe from the Conſtitution of the Body prior to the Invaſion of the Diſeaſe; and from the Cauſes acting upon the Brain, and diſconcerting the Fibres of the animal Organs.

HOWEVER, I ſhall lay it down as a Poſition moſt certainly true, that in all Caſes of a Plethora or Fulneſs of Blood, that is, in the ſanguine Apoplexy, it is abſolutely neceſſary to make a large Diſcharge by Bleeding; becauſe this Evacuation immediately takes off from the Preſſure of the animal Organs, by immediately ſubſtracting from the Cauſe.

THE Marks, Characters, and Tokens, that diſcover Blood to abound in the Brain; and which indicate Bleeding, in the higheſt Senſe neceſſary, are to be taken, from the Redneſs of the Eyes, from

from a bloaty Lividneſs in the Complection; and from an apparent Fulneſs of the Jugular Veins.

In a ſanguine Apoplexy, therefore, thus circumſtantiated, I ſhould not fear to take away ſixteen or twenty Ounces of Blood, for the firſt Time, and repeat the ſame Quantity after four or five Hours, in Caſe Succeſs does not anſwer the firſt Diſcharge.

But in the Phlegmatick Apoplexy, where all the Marks and Symptoms of an impoveriſh'd Blood appear, there I ſhould chuſe to be more ſparing of this Fluid; becauſe, under theſe Circumſtances, I cannot conceive of what Benefit it can be, to draw Blood, where the Veſſels are already too much relax'd, and which muſt, of Conſequence, ſuffer greater Relaxations from ſuch a Diſcharge. However, to comply with Cuſtom, and as it is a Doubt, whether it be helpful or hurtful, I would, even, here, adviſe the looſing of twelve Ounces; but if farther Diſcharges be judg'd neceſſary, from the Patient not recovering from the Fit, then let Blood be drawn by Cupping-Glaſſes apply'd to the Neck and back Part of the

Head, with deep Scarifications, which greatly relieve, in a Fit of the Apoplexy, ariſing from this languid and depreſs'd State of the animal Organs.

Now the Caſe, I ſhall take the Liberty to debate upon, is, whether it is adviſable, and agreeable to the Principles of Practice, to Bleed in the Fit of a Lethargy or Apoplexy, ariſing from a Charge of crude, indigeſtable Meats taken into the Stomach, which, intercepting the Motion of the Blood to the Brain, by neceſſary Conſequence impair and leſſen the Motion of the the Heart, in both its Syſtole and Diaſtole.

Every Body knows, that a full Meal, ſome Hours after, makes us ſhort breath'd, and very inclinable to ſleep; and when the Stomach is extremely diſtended, by ſtuffing and gorging to a very high Exceſs, it ſometimes happens, that this Organ bears ſo hard upon the deſcending Trunk of the Aorta, as not only to impair the Motion of the Heart, but alſo the Action of the animal Faculties; and conſequently occaſions a Lethargy or Fit of an Apoplexy. The Point in Queſtion is, Whether it is proper to bleed the Patient in a Caſe thus circumſtantiated, and ariſing from ſuch a Cauſe;

Cauſe; in my Opinion it ought by all Means to be avoided: But becauſe Obſervations and Facts make the ſtrongeſt Impreſſion on the Mind of the Reader, I will give an Example, by way of Proof, of the fatal Effects of indiſcriminately bleeding without previous Indications of its Neceſſity.

A GENTLEMAN on his Travels makes a hearty Supper of cold, crude, Meats, *viz.* Strawberries, Cream and Melon, that lie heavy on the Stomach, and do not digeſt, upon which a Complaint of Indigeſtion enſues, which, ſometime after is follow'd with a Dozing, Lethargy, or Apoplectick Fit. Now is it poſſible to relieve the Fit, before this Load is diſcharg'd the Stomach? Is it poſſible, that Bleeding can contribute, any Thing, to his Relief, by making this Diſcharge? Nay, is it not highly probable, that Bleeding will prove a real Detriment to the Patient, by relaxing the Fibres of the Organs, and thereby taking off from the Force of the Blood neceſſary to ſupply the Stomach with Strength; and aſſiſt the important Office of Digeſtion.

BUT it is ſtill worſe, when Bleeding is judg'd neceſſary, upon reaſonable Grounds,

to make the Diſcharge from the wrong Part, or from a Part, that could leaſt of all benefit the oppreſs'd Organs; for ſometimes the Stomach, upon its Inflation, bearing hard upon the deſcending Trunk of the Aorta, hinders the Deſcent of Blood to the lower Parts, whereby a greater Charge is ſent up into the Organs of the Brain, upon which a Suſpenſion enſues in the Action of the animal Faculties. In this Caſe to open a Vein in the Foot, and repeat that Operation, when a Diſcharge is immediately wanted from the Head, and a Stop in the Mid-way to block up the Paſſage, and intercept the Revulſion, is ſuch a Mark of Raſhneſs, as could only ariſe either from the extreme Ignorance, or Want of Reflection in the Adviſer.

But, here, it may be enquir'd, *viz.* What Methods, under ſuch Circumſtances, would have been the moſt likely to have ſav'd Life, and recover'd the Patient from the Fit. To this I anſwer, that if a proper ſtimulating Vomit had been immediately exhibited, upon the firſt Complaints of Indigeſtion, and Load, its highly probable, that the indigeſted Matter would, at once, have been diſcharg'd; eſpecially if a warm cordial Purge or carminative Gliſter had been adminiſter'd at a proper

Diſ-

Diſtance, in Caſe the Bowels did not, in Time, freely anſwer by Stool. Bliſters alſo as they ſtimulate the Solids, and help forwards the too ſluggiſh Secretions, muſt, in this Caſe, have been of ſingular Service. And, theſe, I ſhould have thought, the moſt proper Adminiſtrations, in the firſt Attack; and Methods that, in the Nature of Things, muſt have produc'd very happy Effects.

THE Time of Bleeding, where Bleeding is neceſſary, ought generally to be in the Beginning of the Fit, in the firſt Stroke, as ſoon as ever a Surgeon can be got; for this Operation ought never to be omitted or poſtpon'd, in Caſe Indications of a ſanguine Apoplexy appear in the Habit.

THE moſt commodious Part I take to be the Jugular Vein, becauſe Blood extracted from this Vein makes a conſiderable, ſudden Diſcharge of the ſuperfluous Blood, that loads the Brain, oppreſſes the Organs, and intercepts the Action of the animal Faculties, by which means the Parts are relieved of their Preſſure.

GIVE me Leave, here, to recapitulate as briefly as I can, the Obſervations I have

have made upon this Article of Bleeding. I hold it highly neceſſary to be taken away to the Quantity of 16 or 20 Ounces in the ſanguine Apoplexy, I think it may ſometimes be adminiſter'd to good Purpoſes in the Phlegmatic Apoplexy; but that Method by Cupping-Glaſſes, with deep and large Scarifications, in my Judgment, appears the more reaſonable; becauſe it does not ſo ſuddenly take off from the Force and Motion of the great Veſſels, which are abſolutely neceſſary to be kept up, in order to force the Obſtructions from the Organs of the Brain, and Faculties of the Senſes.

But I think it highly improper when the Apoplectic Fit ariſes from cold, crude Meats taken into the Stomach, and which do not digeſt off; in this Caſe I ſhould greatly prefer a ſtimulating Vomit of the *Vin. Benedict.* in Quantity properly adapted to the Greatneſs of the Diſeaſe, which immediately diſcharges, from the Parts affected the Load, that incumbers the animal Organs; and totally oppreſſes the Action of the animal Faculties.

And, in this Senſe, may be verified the Truth of that Aphoriſm of *Celſus. Si omnia Membra vehementer reſoluta ſanguinis*

*guinis Detractio vel occidit vel liberat*, that is, Veneſection certainly cures in the Sanguine, if the Diſeaſe be not too violent, and as certainly kills if adminiſter'd in the Fit of an Apoplexy ariſing from either too much Phlegm, or an Oppreſſion of the Stomach.

And as Bleeding is, undoubtedly, of great Service in the ſanguine Apoplexy, ſo doubtleſs, Vomits ſkilfully choſen, are equally neceſſary, eſpecially, if the Diſeaſe, either happen, in a phlegmatic Conſtitution; or ariſe from an over-great Charge of indigeſtible Meats taken into the Stomach. I could relate ſeveral Caſes of Cures effected by this Means only, or at leaſt where this was the principal Remedy. And *Riverius*, in the Chapter of the Apoplexy and comatoſe Affections, gives a remarkable Caſe of a noble Man that was ſucceſſively reſcu'd from three Fits, in the Compaſs of two Years, by the Adminiſtration of Vomits only.

To conclude: Principles, therefore, are of the higheſt Conſequence in Practice, becauſe they teach us to vary our Adminiſtrations, according to the Difference of Conſtitution, and Variety of Cauſes, that occaſion the Diſeaſe; while practical

Indications, or Indications grounded upon practical Obſervations, oblige us to uſe the ſame Remedies, in all Caſes where there is a Similitude of Symptoms, without any regard to the Conſtitution, Cauſes, and their Conſequences; which muſt often, in the Courſe of Practice, be attended with very fatal Effects.

*FINIS.*

MVSEVM
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